XR-U500/U700

SERVICE MANUAL

E Model

Photo : XR-U700

Model Name Using Similar Mechanism		NEW
Tape Transport Mechanism Type	XR-U500	MG-55PC-31
	XR-U700	MG-55PB-31

SPECIFICATIONS

Cassette player section

Tape track 4-track 2-channel stereo
Wow and flutter 0.08% (WRMS)
Frequency response 30—20,000Hz
Signal-to-noise ratio
(XR-U700)

Cassette type	Dolby B NR	Dolby C NR	Dolby NR off
TYPE II, IV	67dB	73dB	61dB
TYPE I	64dB	70dB	58dB

(XR-U500)

Cassette type	Dolby B NR	Dolby NR off
TYPE II, IV	67dB	61dB
TYPE I	64dB	58dB

Tuner section

FM

Tuning range FM tuning interval:
50kHz/200kHz switchable
87.5—108.0MHz (at 50 kHz step)
87.5—107.9MHz (at 200kHz step)
Antenna terminal External antenna connector
Intermediate frequency 10.7MHz
Sensitivity 8dBf
Selectivity 75dB at 400kHz
Signal-to-noise ratio 65dB (stereo), 70dB (mono)
Harmonic distortion at 1kHz
0.5% (stereo), 0.3% (mono)
Separation 35dB at 1kHz
Frequency response 30—15,000Hz

AM

Tuning range AM tuning interval:
9kHz/10kHz switchable
531—1,602kHz (at 9kHz step)
530—1,710kHz (at 10kHz step)
Antenna terminal External antenna connector
Intermediate frequency 10.71MHz/450kHz
Sensitivity 30μV

Power amplifier section

Outputs Speaker outputs
(sure seal connectors)
Speaker impedance 4—8 ohms
Maximum power output 30W×4 (at 4 ohms) (XR-U700)
25W×4 (at 4 ohms) (XR-U500)

General

Output lead Power antenna relay control lead
Power amplifier control lead
Tone controls Bass ±8dB at 100Hz
Treble ±8dB at 10kHz
Power requirements 12V DC car battery
(negative ground)
Dimensions Approx. 186×57×170mm
($7^3/_8 \times 2^1/_4 \times 6^3/_4$ in.)
(w/h/d)
not incl. projecting parts and controls

—Continued on next page—

FM/AM CASSETTE CAR STEREO

SONY®

Mounting dimension	Approx. 182×53×153mm ($7^1/_4 \times 2^1/_8 \times 6^1/_8$ in.) (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.3kg (2 lb. 14 oz.)
Supplied accessories	Wireless remote commander RM-X36 (1) (XR-U700) Mounting hardware (1 set) Power connecting cord (1) Front panel case (1)
Optional accessories	Wireless remote commander RM-X36 (XR-U500) UNILINK cable (supplied with an RCA pin cord) RC-61 (1m), RC-62 (2m) RCA pin cord RC-63 (1m), RC-64 (2m), RC-65 (5m)
Optional equipment	CD changer CDX-U606, CDX-U404, CDX-U303, etc. Source selector XA-U20, XA-U40 Digital signal processor XDP-U50D (XR-U700)

Design and specifications subject to change without notice.

Features

General

- **Built-in power amplifier (max. output: 4ch×30W (U700), 25W (U500))** enables you to enjoy a 4-speaker system.
- Supplied with **the wireless remote commander.**
- **Detachable-front panel** enables you to take the front panel away with you when you leave your car. (page 13)
- **Caution alarm** will be activated if you turn off the ignition key without removing the front panel from the unit.
- Switchable **two color illumination (amber and green).** (page 9)
- Provided with a **digital 12-hour clock.** (page 14)
- Line outputs for connecting an optional power amplifier.
- **Telephone-mute function** for decreasing the volume automatically with a telephone call.

Tuner section

- Up to 30 stations can be preset: 20 stations on FM and 10 stations on AM.
- **BTM (Best Tuning Memory) function** automatically searches and stores the stations with the strongest signals on the preset number buttons in order of frequency. (page 26)
- **Station memo function** for displaying the names of the radio stations stored in the memory. (page 29)

Cassette player section

- **Dolby B and C NR*** system reduces hiss noise during tape playback. (page 7)(XR-U700)
- **Dolby B NR*** system reduces hiss noise during tape playback. (page 7)(XR-U500)
- **Intro scan function** for playing the first 10 seconds of each track. (page 15)
- **Repeat play function** for playing back a currently playing track repeatedly. (page 15)
- **Blank skip function** for automatically skipping blank spaces during tape playback. (page 7)
- **ATA (Automatic Tuner Activation)** for automatically turning on the tuner while fast-forwarding or rewinding a tape. (page 7)

*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

CD changer control section (when the optional Sony CD changers are connected)

- **Several Sony CD changers (not supplied) can be connected and controlled** by the use of the Sony source selector(s) (not supplied).
- **Custom file function** for displaying the title of each disc and setting the PLAY/SKIP mode on each track. (page 20)
- **Shuffle play function** for playing tracks in random order. (page 17)
- **Intro scan function** for playing the first 10 seconds of each track. (page 19)
- **Repeat play function** for playing a currently playing track repeatedly. (page 18)

DSP control section (when the optional digital pre-amplifier XDP-U50D is connected) (XR-U700)

- **Surround menu** enables you to select different soundfields inside your car.
- **DSP custom file function** enables the discs to be played in the customized DSP modes. (page 36)
- **LSM function** enables the programs to be played with the preset surround menu. (page 38)

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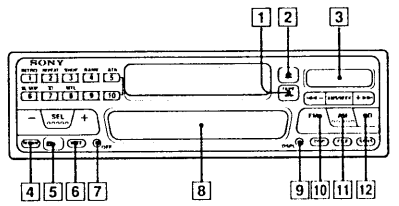
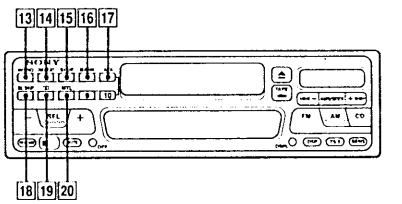
SECTION 1
GENERAL

This section is extracted from XR-U700's instruction manual.

Location and Function of Controls

Main Unit





Refer to the pages in ● for details.

[1] **TAPE/◄II► (playback/transport direction change) button** ⑮

[2] **≜ (eject) button**

[3] **Sub (current mode) display window**
Displays the currently selected program source (tape/CD/FM/AM) and the DSP mode.

[4] **RELEASE (front panel release) button** ⑱

[5] **Receptor for the remote commander**

[6] **MUTE button**
Press to mute the sound momentarily. Press again to restore the same volume level. This button is also canceled in the following cases:
— when the + side of the [−/+] button or the OFF button is pressed.
— when ejecting a cassette by pressing the ≜ button during tape playback.
— when the ignition key of your car has been turned to the OFF position for more than eight seconds.

[7] **OFF button**
Press to turn off the unit.

[8] **Main (current operation) display window**
Displays the information of the currently selected program source such as the tape transport direction, the elapsed playing time of a disc and the current time etc.

[9] **DSPL (display mode change/time set) button** ⑭
Each time the button is pressed, the display on the main display window changes as follows:

	"PLAY" → "PLAY" (The indication will be scrolled.) → Clock (Clock → Frequency)*1
	Elapsed playback time → Disc title*2 → Clock
	Station name*2 → Frequency → Clock

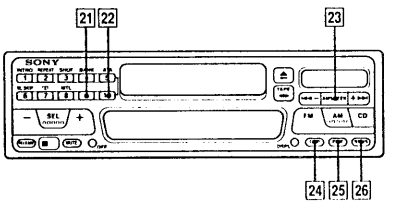
*1 While the ATA function is activated.
*2 If the title has not being registered, "- - - - - - - -" indication will appear on the main display window.

[10] **FM (radio on/band select) button** ㉓
Each time the button is pressed, the band changes in order of:
FM1 → FM2 → FM1.

[11] **AM (radio on) button** ㉔

[12] **CD (disc play/CD changer select) button** ⑬

[13] **INTRO button** (INTRO 1)	Intro scan ⑮⑱		
[14] **REPEAT button** (REPEAT 2)	Repeat play ⑮⑱		
[15] **SHUF button** (SHUF 3)	—	Shuffle play ⑰	
[16] **BANK button** (BANK 4)	—	Bank play ㉑	
[17] **ATA button** (ATA 5)	**Automatic Tuner Activation** Press to make the tuner turn on automatically every time you fast-wind a tape. To cancel, press it once more.	—	
[18] **BL.SKIP button** (BL SKIP 6)	Press to skip a blank space (longer than eight seconds) automatically during tape playback. To cancel, press it once more.	—	**Preset number buttons** ㉗㉘
[19] **DD (Dolby NR) button** (TI 7)	Press when listening to a tape recorded in the Dolby B-NR or Dolby C-NR system. Each time you press the button, the mode changes as follows: Dolby B-NR → Dolby C-NR → Cancel.	—	
[20] **MTL (metal/CrO2) button** (MTL 8)	Press when listening to a CrO_2 (TYPE II) or metal (TYPE IV) tape. To cancel, press it once more.	—	



[21] (9)	—	—	**Preset number buttons** ㉗㉘
[22] (10)	—	—	
[23] **AMS/SEEK button** (◄◄ AMS/SEEK ►►)	**AMS (Automatic Music Sensor) function** (◄◄): Press once to locate the beginning of the currently playing track. (►►): Press once to locate the beginning of the next track. Press repeatedly to locate previous or succeeding tracks.		**Automatic tuning** ㉕ (Press lightly.)
	Manual search Keep either side of the button pressed until the desired part of a track is located. (◄◄): To rewind (►►): To fast-forward	(◄◄): To fast-reverse (►►): To fast-forward	**Manual tuning** ㉕ (Press and hold.)

The buttons [13] – [22] function as the direct disc selection buttons as well during CD play.
Press the button whose number corresponds with the desired disc number for more than one second.

[24] **DSP* (DSP mode on • off/select) button**
When pressed lightly, this button functions as the DSP mode on/off button. When pressed for more than one second, the unit enters the DSP select/adjust mode. Each time the button is pressed, the DSP select/adjust mode and the display on the sub display window changes as follows:

Sub display window	DSP select/adjust mode
SUR	Surround menu select/ Effect level adjustment
LP	Listening position adjustment
SUB	Subwoofer tone/volume adjustment
BAS	Bass adjustment
TRE	Treble adjustment

* Digital Signal Processor

[25] **FILE (custom file mode select/set • list up) button**
Each time the button is pressed, the mode changes as follows:
►: Press the button for more than two seconds.
►: Press the button lightly.

Normal CD play/radio reception
↓
Name edit mode ◄
↓
PLAY/SKIP edit mode*1
↓
DSP custom file mode*2
↓
►Cancel (Normal CD play/radio reception)

*1 The unit enters this mode only when the CD custom file function is activated.
*2 The unit enters this mode only when the DSP custom file function is activated.

[26] **SENS (sensitivity adjust/best tuning memory function) button** ㉖㉘

Changing the illumination color

Press the (INTRO 1) button while pressing the button. You can choose the color between amber and green.

When listening at low volume with enhanced bass and treble (loudness function)

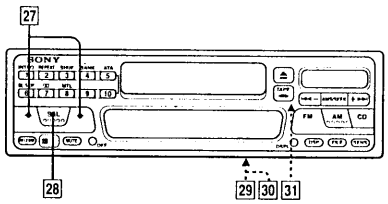
Press the (REPEAT 2) button while pressing the button. To cancel the mode, press these buttons once more. (When the optional XDP-U50D is connected, you cannot use this function.)

Muting the beep tone

Press the (BL SKIP 6) button while pressing the button. To obtain the beep tone again, press these buttons once more.

Changing the line output level (when the optional XDP-U50D and a graphic equalizer are connected)

Press the (MTL 8) button while pressing the button. To cancel the mode, press these buttons once more. For details, see page 32.



[27] **(bass/treble/balance/fader/volume control) button**
Press to adjust each mode.

[28] **SEL (control mode select) button**
Press to select the desired control mode: BAS (bass), TRE (treble), BAL (balance), FAD (fader) or VOL (volume).

Sub display window	Control mode		
		Press – side	Press + side
BAS	Bass control	For less bass	For more bass
TRE	Treble control	For less treble	For more treble
BAL	Balance control	To decrease the right-speakers' volume	To decrease the left-speakers' volume
FAD	Fader control*	To decrease the rear-speakers' volume	To decrease the front-speakers' volume
VOL	Volume control	For less volume	For more volume

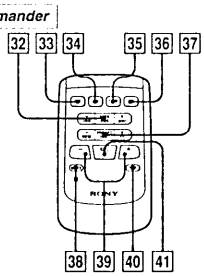
** When the optional XDP-U50D is connected, you can adjust the fader whether the DSP mode is on or off.
* When you use the stereo graphic equalizer (not supplied), set the fader control to the center position and adjust the level with the equalizer.

[29] **POWER SELECT switch (located on the bottom of the unit)**
See "POWER SELECT Switch" in the installation/connections manual.

[30] **Frequency select switch (located on the bottom of the unit)**
See "Frequency Select Switch" in the installation/connections manual.

[31] **Reset button (located on the front side of the unit hidden by the front panel)**
Press this button when you use this unit for the first time, when you have changed the car battery, or when the buttons of this unit do not function properly.

Wireless Remote Commander



Buttons of the same function as those on the main unit

[32] **AMS (Automatic Music Sensor) button*** | **SEEK (automatic tuning) button*** ⑳

* You cannot do the manual search and manual tuning with the remote commander.

[33] **FM (radio on/band select) button** ㉕

[34] **AM (radio on) button** ㉕

[35] **TAPE (playback/transport direction change) button** ⑮

[36] **CD (disc play/CD changer select) button** ⑯

[38] **MUTE button**

[39] **(bass/treble/balance/fader/volume control) buttons**

[40] **OFF button**

[41] **SEL (control mode select) button**

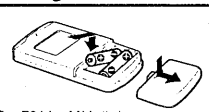
Different function buttons

[37] FF/REW (fast-forward/rewind) button	DISC (disc change) button +: To select the next disc number –: To select the previous disc number	PRESET (preset search) button ㉖

When the POWER SELECT switch is set to the OFF position, the unit cannot be operated with the wireless remote commander unless one of the CD, FM and AM buttons on the unit is pressed or a cassette is inserted to activate the unit first.

Wireless Remote Commander

Installing the Batteries



Two R6 (size AA) batteries

Battery life
When the batteries become weak, you will not be able to operate the unit with the remote commander. Battery life is approx. six months although it depends on the way of use.

Notes on batteries
To avoid damage from battery leakage and corrosion:
— insert the batteries with correct polarity
— do not use an old battery with a new one, or different types of batteries together
— remove the batteries when you do not use the unit for a long period of time
— do not charge the batteries.
If any battery leakage occurs, replace the batteries with new ones after cleaning the battery compartment.

Notes on the Remote Commander

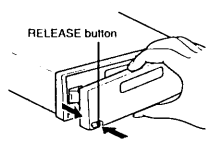
- Do not leave the remote commander in a location near any heat sources, or in a place subject to direct sunlight (especially on the dashboard in summer, etc.).
- When you park the car in direct sunlight, place the remote commander in a location not subject to direct sunlight such as the glove-box.

Detaching and Attaching the Front Panel

The front panel of this unit can be detached in order to prevent the unit from being stolen.

Detaching the Front Panel

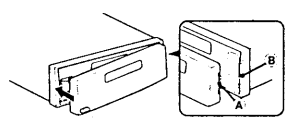
Before detaching the front panel, be sure to press the OFF button first. Then press the RELEASE button to open up the front panel and detach the panel by pulling it towards you as illustrated.



Be sure not to drop the panel when detaching it from the unit.

Attaching the Front Panel

Apply the right hand side of the front panel to the unit by attaching part A of the front panel to part B of the unit as illustrated and push until it clicks.

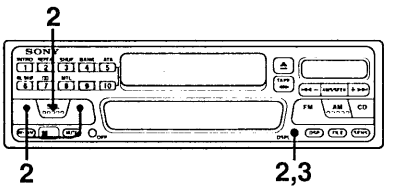


Caution alarm

If you turn the ignition key to the OFF position without removing the front panel, the caution alarm will be activated and a beep tone will be heard for a few seconds (only when the POWER SELECT switch is set to the ON position).

Notes
- Make sure that the front panel is the right way up when attaching it to the unit as it cannot be attached upside down.
- Do not press the front panel hard against the unit when attaching it to the unit. It can easily be attached by pressing it lightly against the unit.
- When you carry the front panel with you, put it in the supplied front panel case.
- Do not press hard or give excessive pressure to the display windows of the front panel.
- Before removing the front panel, be sure to turn the power off. However, if you press the RELEASE button to detach the panel while the unit is still turned on, the power will be automatically turned off in order to protect the speakers from being damaged.
- Do not expose the front panel to direct sunlight, heat sources such as hot air ducts or leave it in a humid place. Never leave it on the dashboard etc. of a car parked in direct sunlight where there may be a considerable rise in temperature inside the car.

Setting the Clock



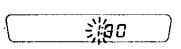
The clock has a 12-hour digital indication.

For example, to set it to 10:08.

1 **Turn the ignition key to the ON position.**

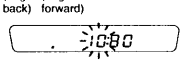
2 **Press the DSPL button for more than two seconds.**

DSPL



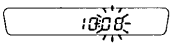
While keeping the DSPL button pressed, proceed with the following;

Press either side of the button to set the hour digits. (to go back) (to go forward)

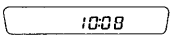


Press the SEL button.

Press either side of the button to set the minute digits. (to go back) (to go forward)

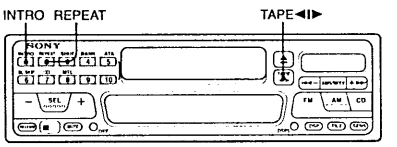


3 **The clock starts activating when you take your finger off the DSPL button.**

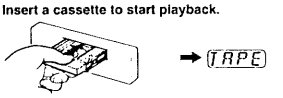


Note
If the POWER SELECT switch on the bottom of the unit is set to the OFF position, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio, or start CD play or tape playback.

Listening to Tape Playback



Insert a cassette to start playback.



If a cassette is already inserted

TAPE ◄II►

Playing in Other Modes

Listening to the first 10 seconds of each track — Intro scan function

Press the INTRO (1) button during playback.

The first 10 seconds of all the tracks are played. When you find the desired track, press the button once more. The unit returns to the normal playback mode.

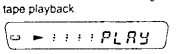
Listening to the currently playing track repeatedly — Repeat play function

Press the REPEAT (2) button during playback.

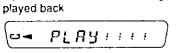
When the currently playing track is over, the same track is played again from the beginning. To cancel this mode, press the button once more.

You can use the supplied wireless remote commander as well.

Tape transport direction indication
Press the DSPL button during tape playback.



The "PLAY" indication will be scrolled across the main display window from left to right while the top side of the cassette is being played back.

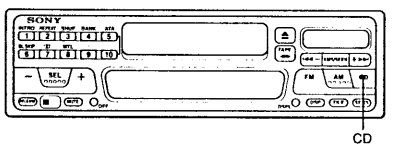


The "PLAY" indication will be scrolled across the main display window from right to left while the reverse side of the cassette is being played back.

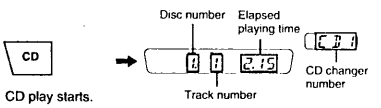
Note
The intro scan function will be canceled if you turn off the unit by pressing the OFF button or turning the ignition key to the OFF position and leaving it for more than eight seconds.

Listening to CD Play

(With the Optional CD Changer(s) Connected)



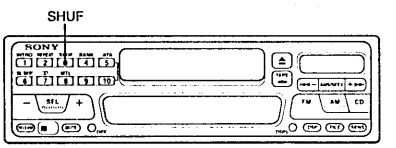
Press the CD button.



You can use the supplied wireless remote commander as well.

If the unit is set in the normal playing mode, after the end of a disc, the disc with the next number shown will be played. The order of the CD play can be rearranged by changing the playing modes. For details, see "Playing in Other Modes" (page 17).

Playing in Other Modes



Playing the Discs Randomly

— Shuffle Play Functions

Playing the tracks on the currently selected disc randomly — Disc shuffle play

Press the SHUF (3) button lightly to get the "SHUF 1" indication during CD play.

Playing every track on every disc in the currently selected CD changer randomly — CD changer shuffle play

Press the SHUF (3) button lightly to get the "SHUF 2" indication during CD play.

Playing every track on every disc in all the CD changers connected randomly — All shuffle play (when two or more CD changers are connected)

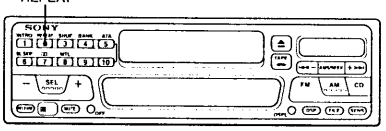
Press the SHUF (3) button lightly to get the "SHUF 3" indication during CD play.

The function of the SHUF button changes cyclically as follows:

SHUF 1 (Disc shuffle)
↓
SHUF 2 (CD changer shuffle)
↓
SHUF 3* (All shuffle)
↓
Cancel (Normal CD play mode)

* All-shuffle play (SHUF 3) mode functions only when two or more changers are connected to the unit. When only one changer is connected, the "SHUF 3" indication will not be displayed.
In this case, if you press the SHUF button again while the "SHUF 2" indication is being displayed, the shuffle play will be canceled.

REPEAT



Playing a Disc Repeatedly
— Repeat Play Functions

Playing the currently selected track repeatedly — Track repeat

Press the REPEAT 2 button lightly to get the "REP 1" indication during CD play.

Playing the currently selected disc repeatedly — Disc repeat

Press the REPEAT 2 button lightly to get the "REP 2" indication during CD play.

When the last track on the currently selected disc is over, the CD play is repeated from the beginning of that disc.

Playing the discs in the currently selected CD changer repeatedly — CD changer repeat (when two or more CD changers are connected)

Press the REPEAT 2 button lightly to get the "REP 3" indication during CD play.

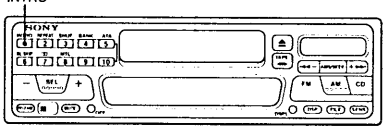
When the last disc in the CD changer has been played, the CD play will be repeated from the first disc in the currently selected CD changer.

The function of the REPEAT button changes cyclically as follows:

REP 1
(Track repeat)
↓
REP 2
(Disc repeat)
↓
REP 3*
(CD changer repeat)
↓
Cancel (Normal CD play mode)

* CD changer repeat (REP 3) mode functions only when two or more CD changers are connected to the unit. When only one CD changer is connected, the "REP 3" indication will not be displayed. In this case, if you press the REPEAT button again while the "REP 2" indication is being displayed, the repeat mode will be canceled.

INTRO



Listening to the First 10 Seconds of Each Track — Intro Scan Function

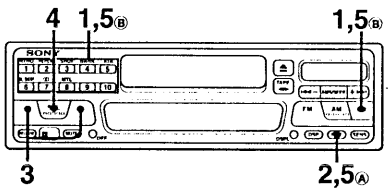
Press the INTRO 1 button lightly during CD play.

The first 10 seconds of all the tracks on the currently selected disc are played in order. After the first disc is played with the intro scan function, the next disc is played. When two or more CD changers are connected, after the last disc is played, CD play moves on to the next CD changer.

When you find the desired track, press the INTRO button once more.
The unit returns to the normal CD play mode.

If the INTRO button is pressed during shuffle play, the first 10 seconds of every track will be played randomly

Displaying the Title of Each Disc
— Disc Memo Function



You can put a title of your own choice onto a disc (one title per disc). The title can be displayed on the main display window while the disc is being located and played.

Putting Your Personalized Titles onto the Discs

1 Play the disc that you wish to title.

CD → INTRO 1 — 10 → CD
(Press for more than one second.)

2 Press the FILE button for more than two seconds to enter the name edit mode.

FILE → _ _ _ _ _ _ _ _
Name edit mode

3 Press either side of the − / + button to select the desired characters.

Each time you press either side of the − / + button, characters appear in the following order:

− → A → B → C → ... → X → Y → Z → 0 → 1 → 2 → 3 → ...

+ → ... → (→) → \ → / → * → - → + → 9 → ...

You can use the supplied wireless remote commander as well.

4 Press the SEL button after locating the desired character.

SEL → _ _ _ _ _ _ _ _

The flashing part moves to the next space on the right. Repeat steps 3 and 4 to enter the entire titles. Up to eight characters can be used per disc.

5 (A) To return to the normal CD play mode

FILE

Press the FILE button for more than two seconds.

(B) To continue to put titles onto the discs

CD or INTRO 1 — 10
(Press for more than one second.)

Notes
- If you press the SEL button when the eighth character (farthest right character) is flashing, the flashing part goes back to the first character (farthest left character).
- If you wish to put a blank space after a character, select "_" (under-bar).

If you press the CD button, the next CD changer will be selected. (when two or more CD changers are connected)

Changing a title

Play the disc whose title you wish to change and repeat steps 2 to 5.

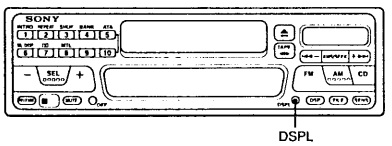
Erasing a title

1 **Select the CD changer and play any disc.**
2 **Press the FILE button for more than two seconds to enter the name edit mode.**
3 **Press the SEL button while pressing the preset number button 5.**
4 **Press either side of the − / + button to select the title that you wish to erase.**
5 **Press the SEL button for more than two seconds.**
Repeat step 4 and step 5 if necessary.
6 **Press the FILE button for more than two seconds.**
Now the title and the PLAY/SKIP settings are erased.
The unit returns to the normal CD play mode.

When you change the title, the PLAY/SKIP settings of the bank function or any setting of DSP custom file function will not be erased at the same time.

If you erase the title, the PLAY/SKIP settings of the bank function and the settings of DSP custom file function will be erased as well.

The alternative method to erase a title
You can erase a title by selecting eight "_"s (under-bars) as described in step 3 of "Putting Your Personalized Titles onto the Discs" (page 20).



Displaying the Title

Press the DSPL button.

DSPL ○ ➡ SCHUBERT

Title display modes

While loading the discs, whatever the display mode the unit is in, the indication on the main display window automatically changes as follows:

► The title of the disc (two seconds) — ► Disc and track number (two seconds) ► Currently selected display mode (two seconds)

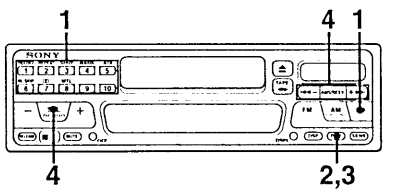
Custom file function

You can register the customized titles and the PLAY/SKIP settings on up to 110 discs* per CD changer (custom file function). These settings are stored in the memory of the CD changer. Therefore, even if you take a custom-filed disc out of the CD changer, you can still use the same custom file function the next time you play that disc in the same CD changer. Furthermore, if your system has several CD changers connected, you can play that disc in another CD changer and still use the same custom file function, provided that the CD changers are inter-connected with the UNILINK cables.

* If you try to register more than 110 discs, the unit will display the "FULL" indication and will not accept the command for custom-filing. In this case, you will have to erase the memory of other discs before you enter the new ones (page 21).

Note
The registered titles of the discs may not appear on the main display window immediately while it is being loaded inside the CD changer.

Playing Selected Tracks on a Disc
— Bank Function



Setting the Play and Skip Modes on the Discs

1 Play the disc to which you wish to set these modes.

CD ➡ INTRO (1) — (10) ➡ CD 1

(Press for more than one second.)

2 Press the FILE button for more than two seconds and put the titles onto the discs.

(FILE)

See page 20 for details about putting on a title. If the title has already been registered, go to step 3.

3 Press the FILE button lightly to enter the PLAY/SKIP edit mode.

(FILE) ➡ 5. 1 PLAY

PLAY/SKIP edit mode

4 Press either side of the AMS button to select the track number you wish to skip and press the SEL button.

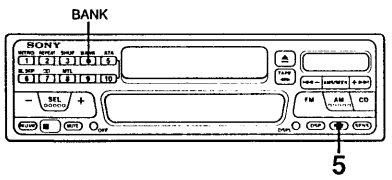
(AMS/SEEK –) (AMS/SEEK +) (SEL) ➡ 5. 3 SKIP

The indication changes from "PLAY" to "SKIP". If you wish to return to "PLAY", press the SEL button once more.

Repeat the operation in this step to set either the "PLAY" or "SKIP" mode on all the tracks.

You can use the supplied wireless remote commander as well.

Notes
- When the title is not registered, you cannot enter the PLAY/SKIP edit mode even if you press the FILE button.
- You can only set the "SKIP" mode onto up to 24 tracks. If a disc has more than 24 tracks, you will not be able to set the "SKIP" mode on the tracks after the 24th track.
- You cannot set the "SKIP" mode onto all of the tracks on a disc.



5 Press the FILE button for more than two seconds.

(FILE)

The unit returns to the normal CD play mode.

Playing with the Bank Function

Press the BANK button lightly during CD play.

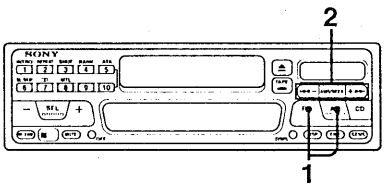
BANK (4) ➡ BANK- ON

The "BANK" indication appears on the main display window. The unit starts playing the tracks with "PLAY" settings which have been set by the PLAY/SKIP edit mode.
To return to the normal CD play mode, press the BANK button once more.

When the BANK button is pressed while pressing the SEL button, the unit starts playing the tracks with "SKIP" settings which have been set by the PLAY/SKIP edit mode.
To go back to the normal playing mode, press the BANK button again while pressing the SEL button.

Even when you play a disc with the PLAY/SKIP settings, if the "BANK" indication has not appeared on the main display window, the disc will not be played according to the settings.

Tuning in a Station



Searching for the Stations Automatically
— Automatic Tuning

1 Select the desired band.

(FM) (AM) ➡ FM 1

2 Press either side of the SEEK button lightly.

(AMS/SEEK –) (AMS/SEEK +)

For lower frequencies — For higher frequencies

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

Tuning in by Adjusting the Frequency
— Manual Tuning

Select the desired band, then press and hold either side of the SEEK button.

(AMS/SEEK –) (AMS/SEEK +)

For lower frequencies — For higher frequencies

Release the button when the desired station is received.

PREVENTING ACCIDENTS!

While you are driving, the use of the Automatic Tuning and the Memory Preset Tuning is recommended in favor of the Manual Tuning.

You can use the supplied wireless remote commander as well.

Note
Make sure that you press either side of the SEEK button lightly. If you keep it pressed, the button will function as the manual tuning button.

When an FM stereo program with a sufficient signal strength is tuned in

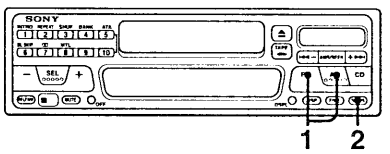
(ST) 87.9

The "ST" indication will appear.

Avoiding the automatic tuning from stopping on stations too frequently (Local Seek Mode)
Press the SENS button lightly to get the "LCL" indication. Only the stations with relatively strong signals can be tuned in. The local seek mode functions only when the Automatic Tuning is in operation.

If FM stereo broadcasting is difficult to receive (Monaural Mode)
Press the SENS button lightly to get the "MONO" indication. The sound will improve, but it will become monaural.

Memorizing the Stations Automatically



The best receiving stations are automatically searched and memorized on each band (FM1, FM2 and AM). Up to 10 stations on each band can be stored on the preset number buttons 1 to 10 in order of frequency.

Memorizing the Stations Automatically — BTM (Best Tuning Memory) Function

1 **Select the desired band.**

FM AM → FM 1

2 **Press the SENS button for more than two seconds.**

(SENS)

You can use the supplied wireless remote commander as well.

The receivable frequency ranges of the FM bands (FM1, FM2) are the same
Therefore, 20 stations can be memorized on FM.

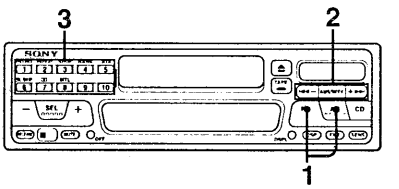
Note
There may be cases where there are not enough receivable stations due to the lack of stations in the vicinity or weak broadcasting signals. In such cases, the BTM operation may stop without all the buttons being occupied with memories.

The BTM function

During radio reception, the BTM function searches all the receivable stations within the currently selected band and memorizes the ones in good receiving conditions in sequence from the lowest frequency.

How to memorize the stations on the preset number buttons
— When there is no preset number indicated on the main display window, all the preset number buttons set in the currently selected band will be filled with the memories.
— When there is a preset number indicated on the main display window, the unit will memorize the stations on the preset number buttons from the one currently being displayed. For example, when you choose FM2 and preset number 3 is being displayed, the operation will start from preset number 3 on FM2, and will stop at preset number 10 on FM2.

Memorizing Only the Desired Stations



Up to 10 stations on each band (FM1, FM2 and AM) can be stored on the preset number buttons in order of your choice.

For example, to store a station on preset number button 1.

1 **Select the desired band.**

FM AM → FM 1

2 **Tune in the station which you wish to store on the preset number button.**

◀◀ — AMS/SEEK — + ▶▶|

3 **Press the preset number button for about two seconds until a beep tone is heard.**

INTRO 1 → ⓘ 87.9

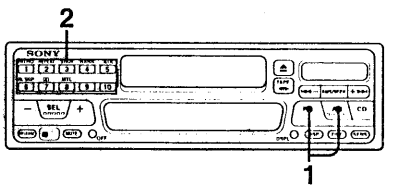
The number of the pressed preset number button now appears on the main display window.

Repeat the same procedure to store other stations.

You can use the supplied wireless remote commander as well.

Each preset number button has only one memory location per band
If you try to store another station on the same preset number button, the previously stored station will be erased.

Receiving the Memorized Stations



1 **Select the desired band.**

FM AM → FM 1

2 **Press the desired preset number button lightly.**

INTRO 1 — 10

You can use the supplied wireless remote commander as well.

Notes
- There may be cases where even the stations which are stored in the memory cannot be received due to weak signals in the vicinity of your car.
- If you keep pressing the preset number button for more than two seconds, the currently received station will be memorized once more. To receive the previously memorized station, make sure that the preset number button is pressed only lightly.

Receiving in Order the Stations Stored in the Memory — Preset Search Function

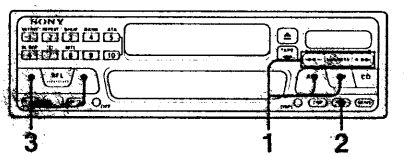
Press either side of the PRESET button on the supplied remote commander.
The number will advance in the following order:

PRESET ▲ → 1→2→3→...→8→9→10→1→2→3→...
(number of the preset number buttons)

PRESET ▼ → 10→9→8→...→3→2→1→10→9→8→...
(number of the preset number buttons)

Displaying the Name of Each Station

— Station Memo Function



You can store the names of radio stations in the memory of the tuner. The name of the station can be displayed on the main display window while the station is being tuned in.

Storing the Station Names in the Memory of the Tuner

1 **Tune in a station whose name you wish to register.**

FM AM ◀◀ — AMS/SEEK — + ▶▶| → FM 1

2 **Press the FILE button for more than two seconds to enter the name edit mode.**

(FILE) → _ _ _ _ _ _ _

Name edit mode

3 **Press either side of the [−] [+] button to select the desired characters.**

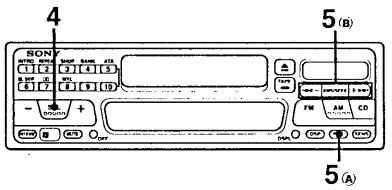
Each time you press either side of the [−/+] button, characters appear in the following order:

→A→B→C→...→X→Y→Z→0→1→2→3→...

→ ↓ → (→) → \ → / → ! → - → + → 9 → ...

_ _ _ _ _ _ _

You can use the supplied wireless remote commander as well.



4 **Press the SEL button after locating the desired character.**

SEL → A a _ _ _ _ _ _

The flashing part moves to the next space on the right. Repeat steps 3 and 4 to enter the entire name. Up to eight characters can be used per name.

5 **(A) To return to the normal radio reception mode**

FILE

Press the FILE button for more than two seconds.

(B) To continue to put names onto the stations

|◀◀ – AMS/SEEK + ▶▶|

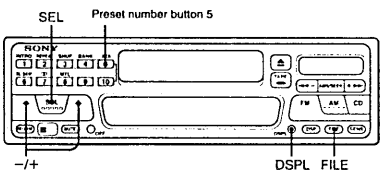
Tune in another station and repeat the procedure.

Notes

- If you press the SEL button when the eighth character (farthest right character) is flashing, the flashing part will move back to the first character (farthest left character).
- If you wish to put a blank space after a character, select the " " (under-bar).

Note

You can store up to 40 names, but if you try to enter more, the "FULL" indication will appear on the main display window and you will not be able to register them. You can register more names after erasing some of the existing names.



Changing a name

Tune in the station whose name you wish to change and repeat steps 2 to 5 of "Storing the Station Names in the Memory of the Tuner" (page 29).

Erasing a name

1 Tune in any station.
2 Press the FILE button for more than two seconds to enter the name edit mode.
3 Press the SEL button while pressing preset number button 5.
4 Press either side of the [–/+] button to search for the names you wish to erase.
5 Press the SEL button for more than two seconds.
Repeat steps 4 and 5 if necessary.
6 Press the FILE button for more than two seconds.
The unit returns to the normal radio reception mode.

The alternative method to erase a name

You can erase a name by selecting eight " "s (under-bars) as described in step 3 of "Storing the Station Names in the Memory of the Tuner" (page 29).

Displaying the Name

Press the DSPL button.

DSPL → HARRIS

Overview of the DSP Function

If the optional digital pre-amplifier XDP-U50D is connected, you can add some effects to the soundfield of the currently listening program source (DSP function).

What is a Digital Signal Processor (DSP)?

The DSP can digitalize and process the audio signal with high speed thus enabling you to adjust the acoustic characteristics of the source sound without losing the sound quality. With the optional XDP-U50D, you can control and adjust the direct, reflected and reverberated sound of the audio output according to your preference.

The DSP modes

- Surround menu select/effect level control mode
- DSP custom file register mode
- LP (listening position) adjust mode
- Sub woofer cutoff frequency select/volume control mode
- Bass adjust mode
- Treble adjust mode

Surround menu

There are ten preset surround modes available with this unit. You can select your desired surround mode to suit the source audio. These modes can simulate different soundfields so that you can enjoy the sensation of being close to the music source or being at a live concert etc.

HALL	Concert hall
JAZZ	Jazz club
DISCO	Disco with thick walls
THEATER	Theater/cinema
PARK	Big open space
LIVE	Live concert
OPERA	Opera house
CHURCH	Church/chapel with a lot of reverberation
STADIUM	Open-air concert in a stadium
CELLAR	Cellar with a lot of reverberation
DEFEAT	Normal mode without any DSP effects*

Notes

- When the optional XDP-U50D and a graphic equalizer are connected, there may be cases where the reproduced sound becomes distorted when the output audio signal of the graphic equalizer is boosted too much. In this case, press the preset number button 8 while pressing the SEL button. The volume will be reduced and the distorted sound will be suppressed. To cancel the mode, press these buttons once more.
- When the optional XDP-U50D is connected, the output sound from the rear speakers may be automatically lowered.
- When the optional XDP-U50D is connected, you cannot use the loudness function.

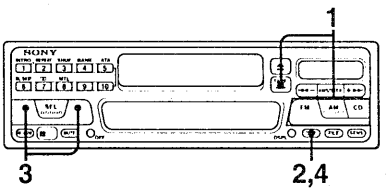
Effect Level adjustment

The balance, the level of the reflected sound and the resonance of the selected surround menu can be adjusted.

* The surround mode will be canceled. However, other preset levels of the DSP function will not be canceled.

Selecting the Surround Menu

(When the Optional Digital Pre-amplifier XDP-U50D is Connected)



1 **Select a program source from tape, CD or radio.**

TAPE ◀II▶ FM AM CD

2 **Press the DSP button for more than one second to enter the surround menu select mode.**

DSP → -DEFEAT- SURR

3 **Press either side of the [–/+] button to select the desired surround menu.**

[–] → HALL→JAZZ→DISCO→...→DEFEAT→HALL→JAZZ...

[+] → CELLAR→STADIUM→CHURCH→...→JAZZ→HALL→DEFEAT

CHURCH

4 **Press the DSP button for more than one second.**

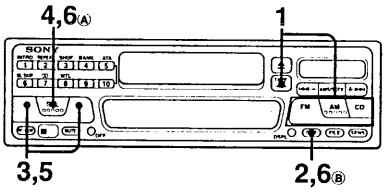
DSP

You can continue to listen with the selected surround menu.

If the "DEFEAT" mode is selected with the [–/+] button, the sound will be restored to the original state without any effects. (The "DSP" indication will disappear.)

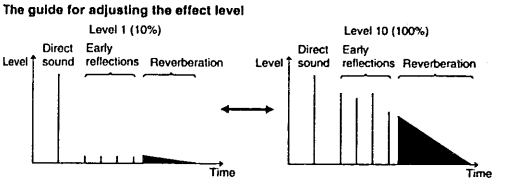
Canceling the surround menu select mode

Press the DSP button lightly. (The "DSP" indication disappears.)



The adjustable range is from 0 to 10. The larger the figure, the more live-performance-like the sound will become.

The guide for adjusting the effect level



Adjusting the Effect Level

1 **Select a program source from tape, CD or radio.**

TAPE ◄/► FM AM CD

2 **Press the DSP button for more than one second to enter the surround menu select mode.**

DSP ➡ -DEFEAT-

3 **Press either side of the [−/+] button to select the desired surround menu.**

➡ HALL➡JAZZ➡DISCO➡...➡DEFEAT➡HALL➡JAZZ...

➡ CELLAR➡STADIUM➡CHURCH➡...➡JAZZ➡HALL➡DEFEAT...

CHURCH

4 **Press the SEL button lightly to enter the effect level adjust mode.**

SEL ➡ EFFECT 1

Note
If the "DEFEAT" mode is selected with the surround menu, the adjustment of the effect level cannot be made.

5 **Press either side of the [−/+] button to select the desired level.**

[−/+] ➡ EFFECT 8

6 **(A) To continue to adjust the effect level of another surround menu**
Press the SEL button lightly.

SEL

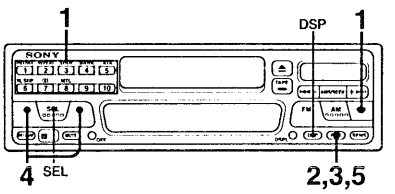
(B) To cancel the effect level adjust mode
Press the DSP button for more than one second.

DSP

To stop the setting procedure
Press the DSP button for more than one second.

To change the effect level to the original (factory-set) setting
Press the SEL button for more than two seconds.

Registering the Surround Menu onto Discs



Once you have registered the surround menu onto the discs, you can enjoy the same surround menu every time you play these discs.

Before registering the DSP custom file, make sure that you have put the titles onto the discs (page 20).

1 **Play any disc.**

CD INTRO (1) — (10) ➡ CD 1

(Press for more than one second.)

2 **Press the FILE button for more than two seconds to enter the name edit mode.**

FILE ➡ _ _ _ _ _ _ _ _

Name edit mode

If the "--------" indication appears on the main display window, put a title onto the disc by referring to "Displaying the Title of Each Disc" on page 20.

3 **Press the FILE button lightly twice to enter the DSP file registering mode.**

FILE ➡ DEFEAT

4 **Press either side of the [−/+] button to select the desired surround menu.**

➡ HALL➡JAZZ➡DISCO➡...➡DEFEAT➡HALL➡JAZZ...

➡ CELLAR➡STADIUM➡CHURCH➡...➡JAZZ➡HALL➡DEFEAT...

CHURCH

You can register customized surround menu onto the maximum of 110 discs. See page 22 for more details.

You can use the supplied wireless remote commander as well.

5 **Press the FILE button for more than two seconds.**

FILE

The unit enters the normal CD play mode.

Playing with the DSP Custom File Mode

Press and hold the SEL button and press the DSP button.

SEL DSP ➡

The "DSP" and "FILE" indications appear on the main display window.
To return to the normal CD play mode, press both the buttons simultaneously once more.

Changing the registered surround menu

Select the disc whose surround mode you wish to alter and repeat steps 2 to 5.

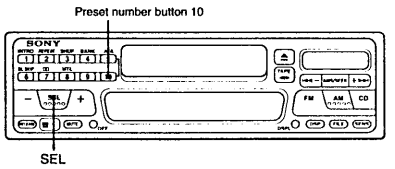
Erasing the registered surround menu

Select the DEFEAT mode in step 4 of "Registering the Surround Menu onto Discs".

If the DSP button is pressed during CD play with the DSP custom file function, the reproduced sound will become unprocessed.

* If the surround menu is not registered on a disc, the "DSP" indication will not appear.

Listening with the Same Surround Mode Every Time — *LSM (Last Surround Memory) Function*



LSM (Last surround memory) function

This function memorizes the selected surround menu of each program source at all times. With this function, you can always listen to the same program source with the same preset surround menu even after changing the program source or turning the unit on afresh.

Playing with the LSM Function

Press and hold the SEL button and press the preset number button 10.

The "LSM" indication is displayed.

For example, if you listen to a disc in the "CHURCH" mode just after listening to a tape in the "HALL" mode, the next time you listen to a tape, it is automatically played in the "HALL" mode.

If you wish to cancel the LSM function, press and hold the SEL button and then press the preset number button 10.

Adjusting the Soundfield Inside Your Car

By adjusting the following, you can set up customized soundfields and tone quality inside your car.

- Listening position
- Sub-woofer's cutoff frequency and volume
- Bass and treble

Listening position adjustment

The time taken by the sound to reach the listener from each speaker can be adjusted. Even in an imperfect listening environment such as inside a car, it is possible to simulate a natural sound image so that a listener can feel as if he is sitting in the middle of the soundfield wherever he sits in the car.

Sub woofer's cutoff frequency/volume adjustment

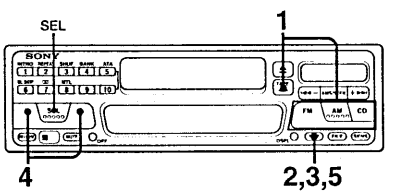
To match the characteristics of the connected sub woofer(s), you can cut the unwanted high and middle frequency audio signal going into the sub woofer(s). The frequency at which the audio signal is cut off is called the cutoff frequency. By setting the cutoff frequency, the sub woofer(s) is (are) able to output clearer bass whose frequency range is lower than the selected cutoff frequency. Thus creating the sound image without the variance of the phases caused by input frequencies.

Bass/treble adjustment

The volume can be adjusted by selecting the center frequencies of both the bass and treble sound to suit the acoustic characteristics inside your car.

Fader adjustment

When the optional XDP-U50D is connected, you can adjust the fader whether the DSP mode is on or off.



Even in an imperfect listening environment such as inside a car, it is possible to simulate a natural soundfield so that a listener can feel as if he is sitting in the middle of the soundfield wherever he sits in the car.

Selecting the Listening Positions

1 **Select a program source from tape, CD or radio.**

TAPE ◄I► FM AM CD

2 **Press the DSP button for more than one second to enter the DSP select/adjust mode.**

DSP → - DEFEAT - → SUPE

3 **Press the DSP button lightly to enter the listening position adjust mode.**

DSP → ALL → LP1

4 **Press either side of the [−/+] button to select the desired position.**

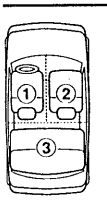
[−/+] → FRONT R → LP3

5 **To cancel the listening position adjust mode**
Press the DSP button for more than one second.

DSP

While adjusting the listening position, each time you press + side of the [−/+] button, the indication of the main (sub) display window changes cyclically as follows:

ALL (LP1)
↓
FRONT (LP2)
↓
FRONT R (LP3)
↓
FRONT L (LP4)
↓
REAR (LP5)



Sub display window	Main display window	Center of soundfield
LP1	ALL	Normal setting (1+2+3)
LP2	FRONT	Front part (1+2)
LP3	FRONT R	Front right (2)
LP4	FRONT L	Front left (1)
LP5	REAR	Rear part (3)

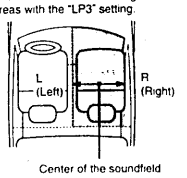
Setting the listening position more specifically

1 **Select the listening position in step 4 on page 40, then press the SEL button.**
2 **The unit enters the left and right balance adjust mode. Press either side of the [−/+] button to set the center of the soundfield.**
–: moves toward L (left)
+: moves toward R (right)
3 **Press the SEL button.**
4 **The unit enters the front and rear balance adjust mode. Press either side of the [−/+] button to set the center of the soundfield.**
–: moves toward F (front)
+: moves toward R (rear)
5 **Press the DSP button for more than one second** to cancel the listening position adjust mode.

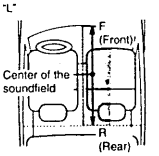
To stop the setting procedure
Press the DSP button for more than one second.

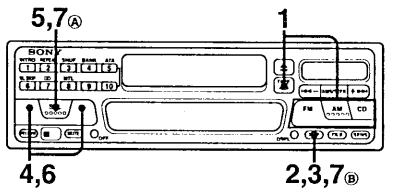
To change the listening position to the original (factory-set) setting
Press the SEL button for more than two seconds.

For example, to adjust the balance between left and right areas with the "LP3" setting.



For example, when the center of the soundfield is moved toward "L"





Adjusting the Cutoff Frequency and Volume of the Sub Woofer

1 **Select a program source from tape, CD or radio.**

TAPE ◀II▶ FM AM CD

2 **Press the DSP button for more than one second to enter the DSP select/adjust mode.**

DSP → -DEFEAT- SUB

3 **Press the DSP button lightly to enter the cutoff frequency adjust mode.**

DSP → FREQ 62 SUB

4 **Press either side of the [−/+] button to select the desired cutoff frequency.**

[−/+] → FREQ 157

Each time you press + side of the [−/+] button, the cutoff frequency changes cyclically as follows:

62 Hz → 78 Hz → 99 Hz → 125 Hz → 157 Hz → 198 Hz → (62 Hz)

5 **Press the SEL button lightly.**

SEL → − 0 +

6 **Press either side of the [−/+] button to select a desired setting on the main display window.**

[+] → The volume of the subwoofer(s) increase(s).

[−] → The volume of the subwoofer(s) decrease(s).

7 **(A) To change the cutoff frequency**
Press the SEL button lightly.

SEL

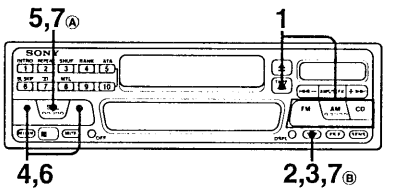
The unit returns to the cutoff frequency adjust mode.

(B) To cancel the cutoff frequency adjust mode
Press the DSP button for more than one second.

DSP

To stop the setting procedure
Press the DSP button for more than one second.

To change the cutoff frequency to the original (factory-set) setting
Press the SEL button for more than two seconds.



You can select the center frequencies you wish to adjust for the bass and treble respectively and boost or cut their levels.

Adjusting the Bass and Treble

1 **Select a program source from tape, CD or radio.**

TAPE ◀II▶ FM AM CD

2 **Press the DSP button for more than one second to enter the DSP select/adjust mode.**

DSP → -DEFEAT- SUB

3 **Press the DSP button lightly to select the bass or treble adjust mode.**

DSP → FREQ 314 BASS
Bass adjust mode

FREQ 3.1k TREB
Treble adjust mode

4 **Press either side of the [−/+] button to select the center frequency.**
(The illustration below is that of the bass adjust mode.)

[−/+] → FREQ 250 BASS

Each time you press + side of the [−/+] button, the center frequency for the bass sound adjustment changes cyclically as follows:

198 Hz → 250 Hz → 314 Hz → 396 Hz → (198 Hz)

Each time you press + side of the [−/+] button, the center frequency for the treble sound adjustment changes cyclically as follows:

2.0 kHz → 3.1 kHz → 4.0 kHz → 5.0 kHz → (2.0 kHz)

5 **Press the SEL button lightly.**

SEL → − 0 +

6 **Press either side of the [−/+] button to select the desired level on the main display window.**

[+] → To boost bass or treble.

[−] → To cut bass or treble.

7 **(A) To change the center frequency**
Press the SEL button lightly.

SEL

The unit returns to the bass or treble adjust mode.

(B) To cancel the bass or treble adjust mode
Press the DSP button for more than one second.

DSP

To stop the setting procedure
Press the DSP button for more than one second.

To change the bass or treble to the original (factory-set) setting
Press the SEL button for more than two seconds.

Installation Instalación 安裝

Precautions

- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.
- Be sure to detach the front panel before you start installing the unit.
- **Press the reset button after completing the connections.**

Mounting angle adjustment
Adjust the mounting angle to less than 20°.

Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.
- Antes de instalar la unidad, extraiga el panel frontal.
- **Después de haber finalizado las conexiones, presione el botón de reposición.**

Ajuste del ángulo de montaje
Ajuste el ángulo de montaje a menos de 20°.

使用前須知事項

- 本機請放在不妨礙司機駕駛之處。
- 避免把本機放在高溫之處，如陽光直接照射、暖氣機前，或灰塵極多、髒亂或易受振動等地方。
- 爲了安全起見，安裝時請使用附屬的安裝道具。
- 開始安裝以前，請先拆下前板。
- **安裝完畢以後，按壓前板的重調鍵。**

安裝角度之調整
請在 20 度以內調整安裝角度。

How to Detach and Attach the Front Panel

To detach
Press the RELEASE button to open up the front panel, then pull it out.

To attach
Align the parts Ⓐ and Ⓑ, and push the front panel until it clicks.

Forma de extraer e instalar el panel frontal

Para extraerlo
Presione la tecla RELEASE a fin de abrir el panel frontal, y tire de él hacia afuera.

Para instalarlo
Alinee las partes Ⓐ y Ⓑ, y presione el panel frontal hasta que chasquee.

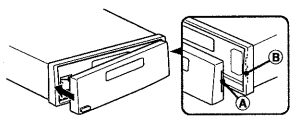
前板之裝卸

要拆卸時
按壓 RELEASE鍵以打開前板，並向外拉出，即可取下。

要安裝時
對齊 Ⓐ及 Ⓑ點，然後把前板向內壓入直至聽到 "咯勒" 聲響起。

To detach
Para extraerlo
要拆卸時

To attach
Para instalarlo
要安裝時



Mounting Example

Installation in the dashboard

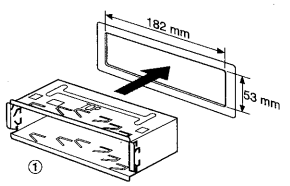
Ejemplo de montaje

Instalación en el salpicadero

安裝例子

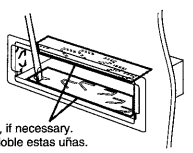
安裝於儀表板上時

1



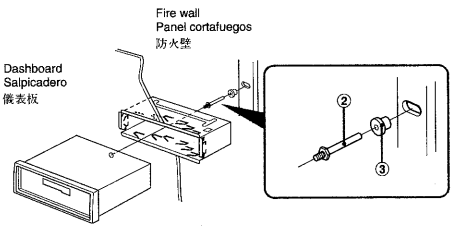
with the "TOP" marking up
con la marca "TOP" hacia arriba
使註著 "TOP" 之面向上

2



Bend these claws, if necessary.
Si es necesario, doble estas uñas.
如有必要折彎這些小翼片

3



Mounting the Unit in a Japanese Car

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your nearest Sony dealer.

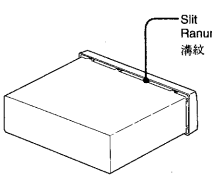
Montaje de la unidad en un automóvil japonés

Usted no podrá instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su proveedor Sony.

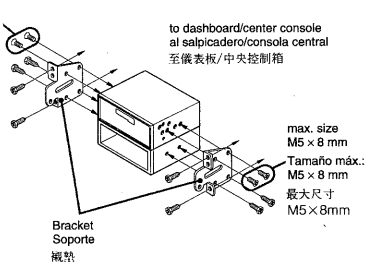
要安裝於日本汽車時

有的日本汽車不能安裝本機。不能安裝時，請向離貴處最近的 SONY 經銷店查詢。

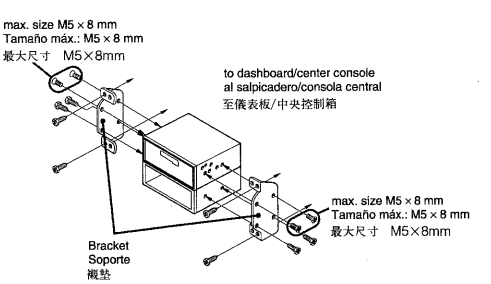
1 **Run a blade along the slits on the back of the front trim and cut it off the unit.**
Pase una cuchilla a lo largo de las ranuras de la parte posterior del adorno frontal y córtelo.
用刀片沿著前框後部的溝紋切割，取掉外框。



2 **TOYOTA**



NISSAN



Note
Use the existing parts supplied to your car.

Nota
Utilice las piezas existentes suministradas con su automóvil.

註
安裝時，請使用附屬於汽車的各種道具。

Connections — Conexiones — 線路之連接

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **red** power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal which is energized when the ignition key is set to the accessory position.
- **Run all ground wires to a common ground point.**

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Antes de realizar las conexiones, desconecte el conductor de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte el conductor de entrada de alimentación **rojo** solamente después de haber conectado todos los demás conductores. Además, cerciórese de conectarlo a un terminal de alimentación de 12 V positivo que se energice al poner la llave de contacto en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**

注意

- 本機只可使用負極接地 12V 直流電操作。
- 連接以前，先拔取汽車電池的接地端子，以免發生短路。
- **紅色**電線必需等所有電線都連接完畢以後才可連接。該紅色電線請連接到汽車發動機點火鑰匙被轉在輔助位置時才通電的 12V 電源端子。
- **所有地線都必需連接到同一接地點才行。**

When the Unit is Used in a Car with No Accessory Position on the Ignition Key — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear **if the unit is used in a car with no accessory position on the ignition key.**
To avoid this battery wear when using the unit in such a car, **set the POWER SELECT switch located on the bottom of the unit to the OFF position.** The illumination is reset to stay off while the unit is not being played.

Note
The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the OFF position.

Empleo de la unidad en un automóvil con llave de encendido sin posición para accesorios — Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada incluso aunque la unidad no se encuentre en reproducción. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si la unidad se utiliza en un automóvil sin posición para accesorios en la llave de encendido**. Para evitar esto, **ponga el selector POWER SELECT situado en la base de la unidad en la posición OFF**. La iluminación estará desactivada cuando la unidad no se encuentre en reproducción.

Nota
La alarma de precaución no se activará cuando el selector POWER SELECT se encuentre en la posición OFF.

若要在引擎點火鑰匙沒具有輔助位置的汽車裏使用本裝置 —POWER SELECT 開關

前板的照明燈即使在不使用本裝置時也會發亮。**若要在引擎點火鑰匙沒具有輔助位置的汽車裏使用本裝置的話**，此照明燈將會一直消耗微量的電池電力。因此爲了避免在這種狀態下的電池電力之消耗，**把本裝置底下的 POWER SELECT 開關設定在 "OFF" 之處**。則不使用本裝置時，照明燈便不亮。

註
POWER SELECT 開關被設定在 "OFF" 的話，前板的操作錯誤警告功能便失效。

Frequency Select Switch

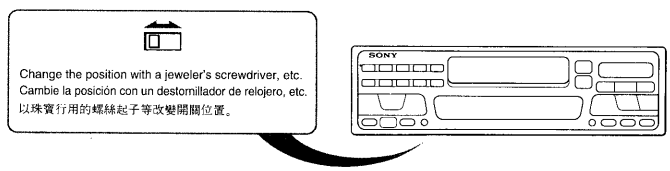
The AM (FM) tuning interval is factory-set to the 9K (50K) position, If the frequency allocation system of your country is based on 10 kHz (200 kHz) interval, set the switch on the bottom of the unit to the 10K (200K) position before making connections.

Selector de frecuencia

El intervalo de sintonía de AM (FM) ha sido ajustado en fábrica a la posición 9K (50K). Si el sistema de asignación de frecuencias de su país se basa en el intervalo de 10 kHz (200 kHz), ponga este selector, situado en la base de la unidad, en la posición 10K (200K) antes de realizar las conexiones.

頻率選擇開關

本機的 AM (FM) 調諧區間在出廠以前被設定在 "9K (50K)" 位置上。若貴地的頻率區間爲 10kHz (200kHz)，連接以前請先把本機機底的選擇開關設定在 "10K (200K)" 之處。


Change the position with a jeweler's screwdriver, etc.
Cambie la posición con un destornillador de relojero, etc.
以珠寶行用的螺絲起子等改變開關位置。
SONY

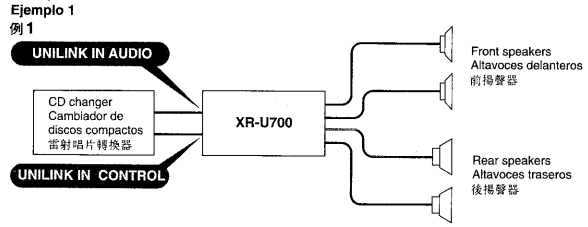
When you change the position of the switch, be sure to press the reset button after the connections are completed.

Después de haber cambiado la posición del selector de frecuencia, cerciórese de presionar el botón de reposición cuando haya finalizado las conexiones.

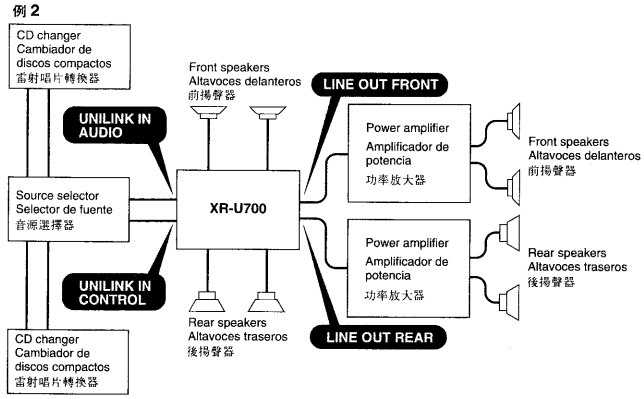
改變開關位置時，則在線路連接完畢以後，必須按重調鍵。

Connection Diagram — Diagrama de conexiones — 連接方塊圖

Example 1
Ejemplo 1
例 1

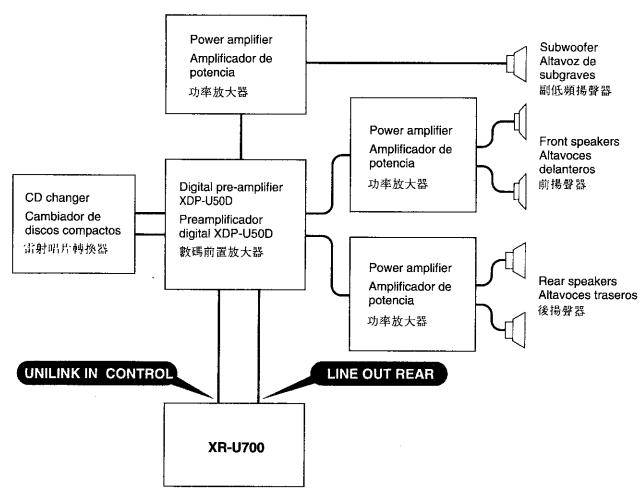


Example 2
Ejemplo 2
例 2



If you connect two or more CD changers, the source selector XA-U20 or XA-U40 is required.
Para conectar dos o más cambiadores de discos compactos, necesitará un selector de fuente XA-U20 o XA-U40,
若連接 2 架以上的雷射唱片轉換器，則必需使用音源選擇器 XA-U20 或 XA-U40。

Example 3
Ejemplo 3
例 3



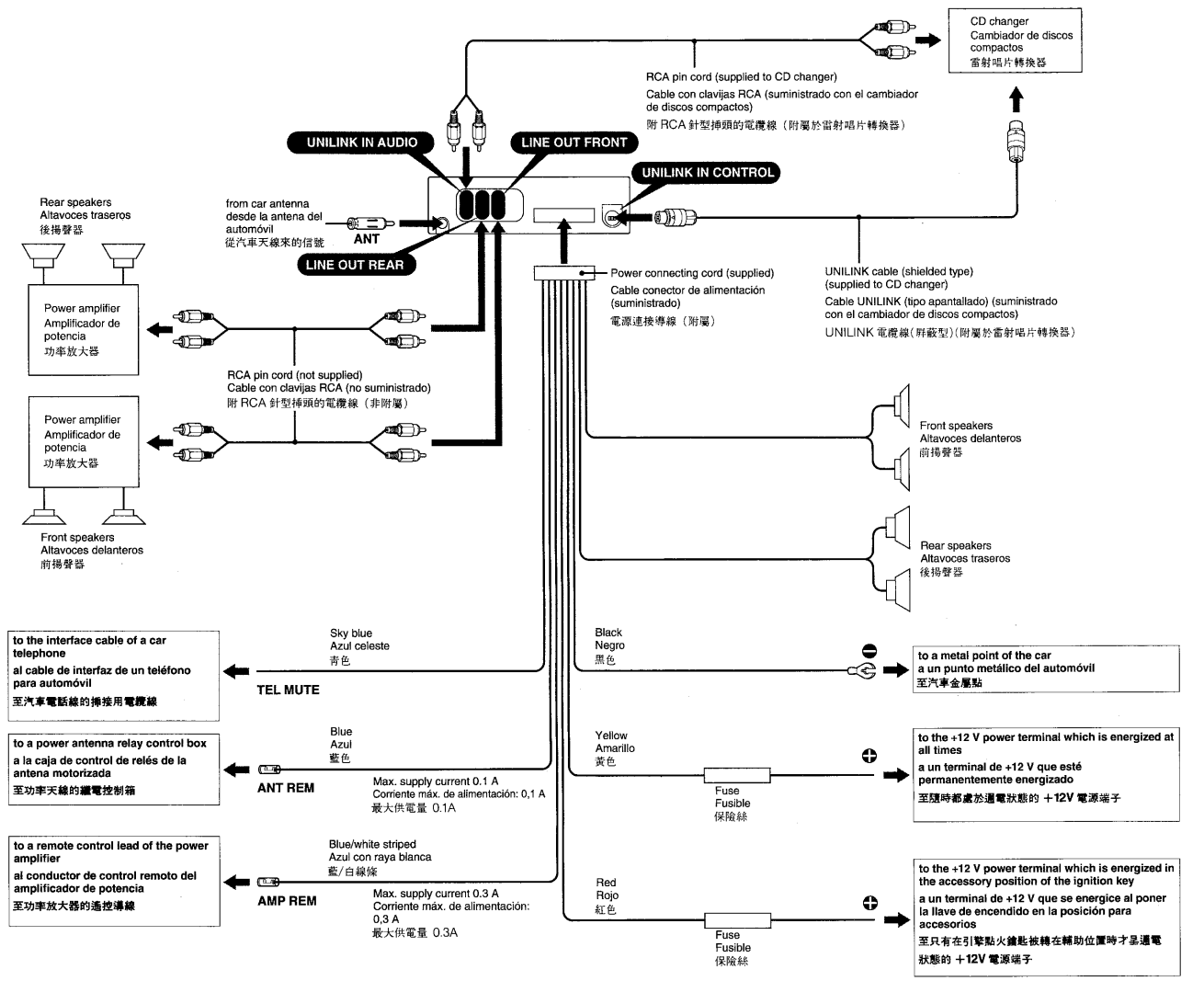
For details about the connection, refer to the operating instructions of XDP-U50D (not supplied).
Con respecto a los detalles sobre la conexión, consulte el manual de instrucciones del XDP-U50D (no suministrado).
線路之連接，詳細請參看 XDP-U50D（非附屬）的使用說明書。

Note
When the optional graphic equalizer or digital signal processor is connected to the unit, the built-in power amplifier of the unit cannot be used.

Nota
Cuando haya conectado un ecualizador gráfico o un procesador de señal digital opcional a la unidad, no podrá utilizar el amplificador de potencia incorporado en la unidad.

註
若連接另售品的多頻均衡器或數碼信號處理機，本機機內的功率放大器便不能使用。

Connections of Example — Conexiones de ejemplo — 連接圖例



Notes on the control leads

- The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) function.
- A power antenna without relay box cannot be used with this unit.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notas sobre los conductores de control

- El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador, o cuando active la función de activación automática del sintonizador (ATA).
- Con esta unidad no podrá emplearse una antena motorizada desprovista de caja de relés.

Conexión para protección de la memoria

Cuando conecte el conductor de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso con la llave de encendido en OFF.

關於控制線

- 當調諧機接通電源，或使用 ATA（自動調諧機通電）功能時，功率天線的控制線（藍色）都能供給 +12V 直流電。
- 本機不能使用沒具繼電功率箱的功率天線。

如何保存本機所記憶著的數據

只要黃色電源輸入導線沒被拔下來，電源將一直供電給存儲電線，因此即使引擎點火鑰匙被轉在熄火之處，所記憶著的數據並不會消除。

Reset Button

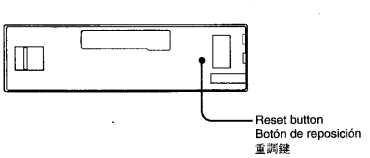
When the installation and connections are over, be sure to press the reset button with a ball-point pen etc. The reset button is located on the left of the connector on the unit side when the front panel is detached.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc. El botón de reposición se encuentra a la izquierda del conector de la unidad cuando se extrae el panel frontal.

重調鍵

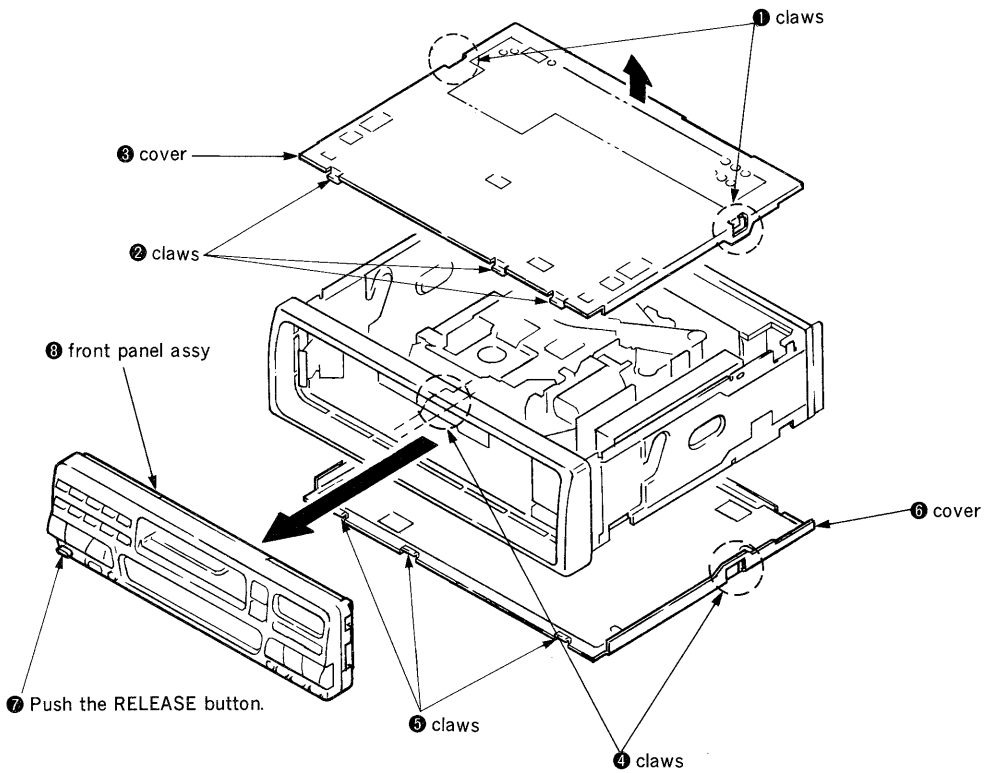
安裝及線路之連接完畢以後，請以一原子筆等按壓重調鍵。重調鍵位於主機和前板之間的連接器（主機那一邊）左邊，拆下前板時就能看得到。



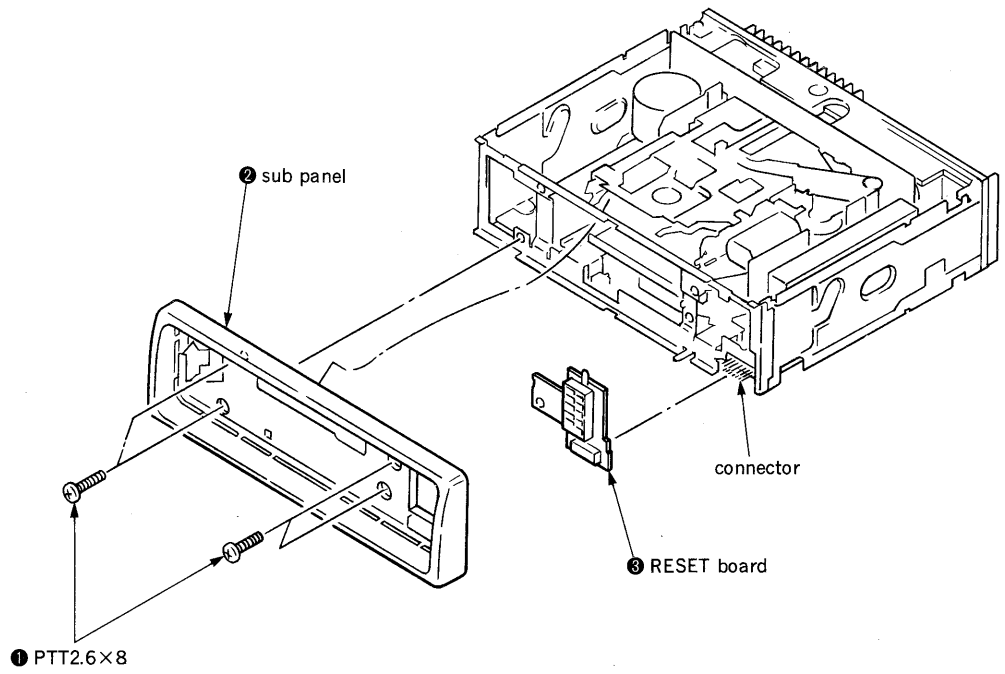
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

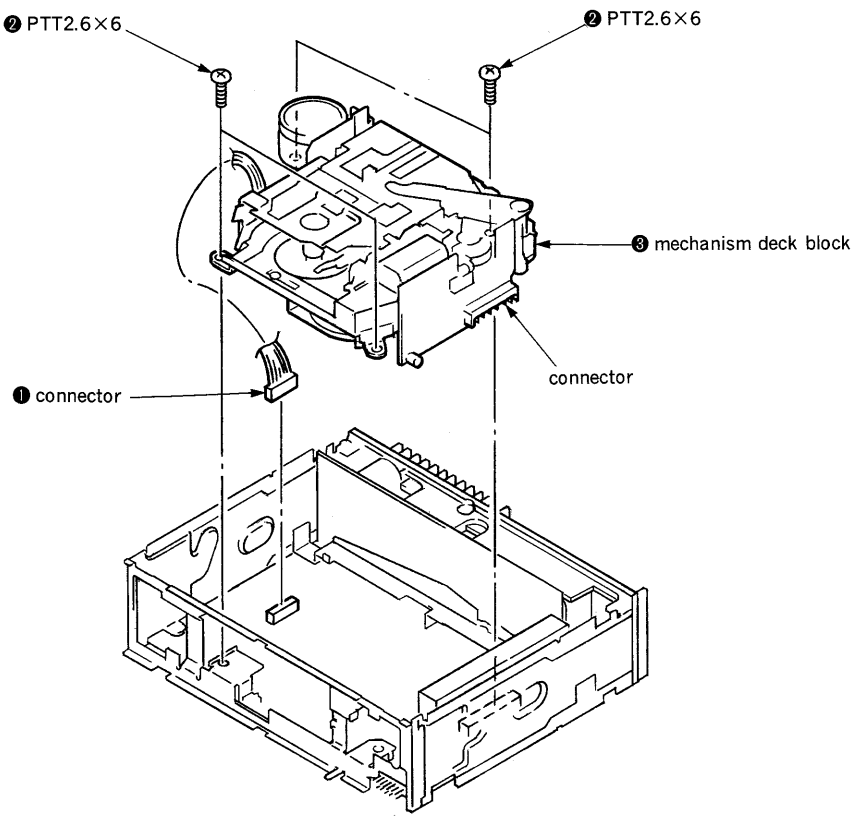
2-1. COVER, FRONT PANEL ASSY



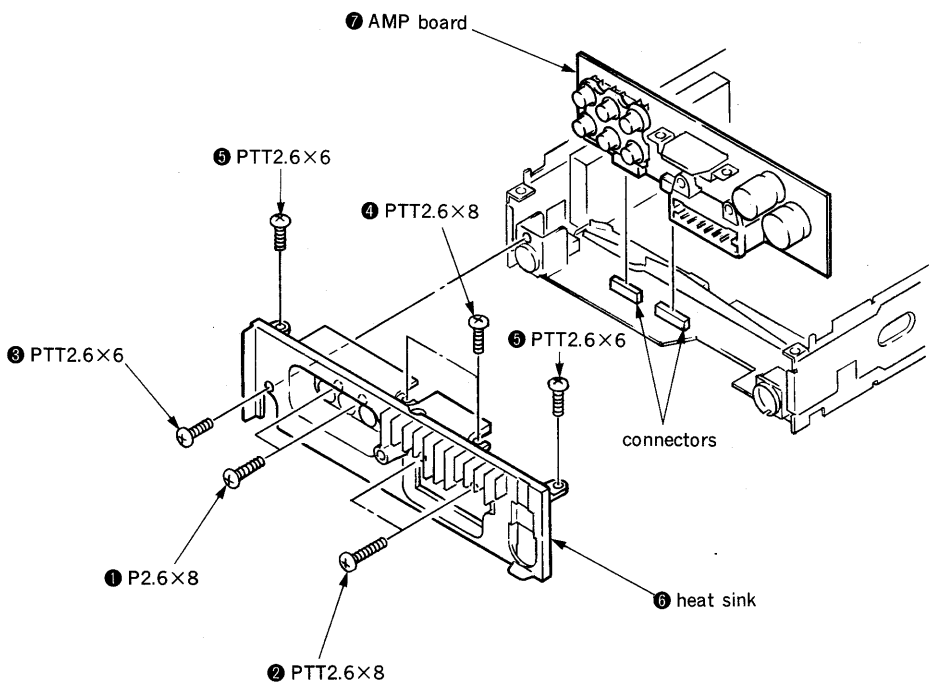
2-2. RESET BOARD



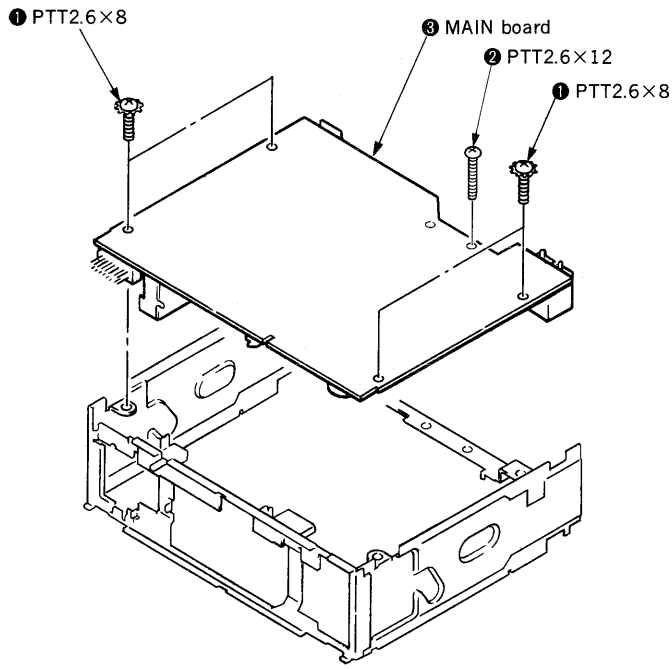
2-3. MECHANISM DECK BLOCK



2-4. AMP BOARD



2-5. MAIN BOARD



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment:
   PB head　　Pinch roller
   Idler　　Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	35−55g•cm (0.49−0.76 oz•inch)
FWD Back Tension		1.5−4.5g•cm (0.02−0.06 oz•inch)
REV	CQ-102RC	35−55g•cm (0.49−0.76 oz•inch)
REV Back Tension		1.5−4.5g•cm (0.02−0.06 oz•inch)
FF, REW	CQ-201B	80−170g•cm (1.11−2.36 oz•inch)

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 100g (more than 3.53 oz)
REV	CQ-403R	

SECTION 4
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM Auto Scan/Stop Level adjustments can be performed easier than it in ordinaly procedure.

〈Set the Test Mode〉
1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for two seconds.
5. Then the display indicates five patterns and stops, the test mode is set.

〈Rerease the Test mode〉
1. Push the "OFF" button.

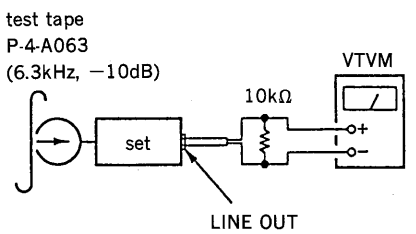
See the adjustment location from on page 24 for the adjustment.

DECK SECTION 0dB=0.775V

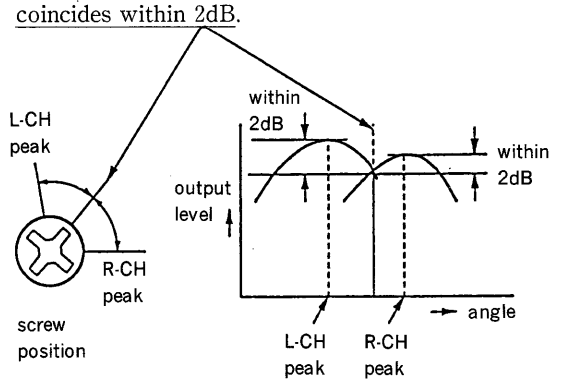
PB Head Azimuth Adjustment

Procedure :

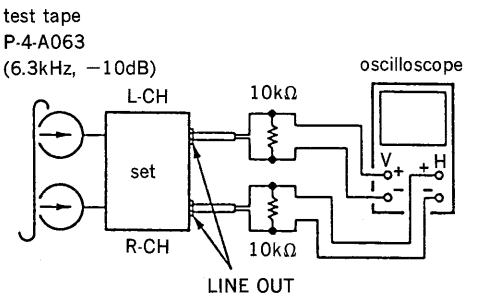
1. Put the set into the FWD PB mode.

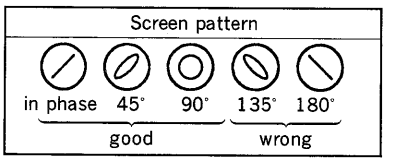


2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 2dB.



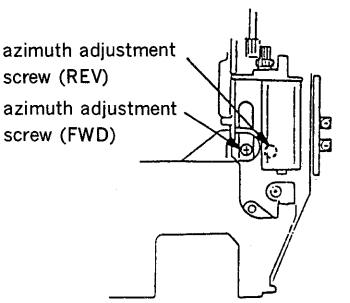
3. Check the phase in the PB mode.





4. Repeat the above adjustment for the REV PB mode.

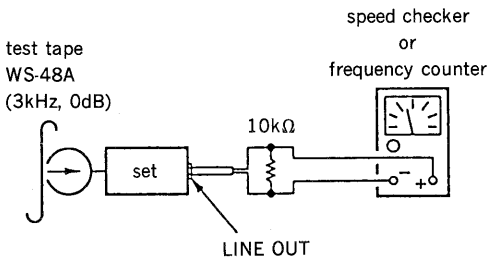
Adjustment Location : PB head



Capstan Motor Tape Speed Adjustment

Procedure :

1. Put the set into the FWD PB mode.



Specification : Constant speed

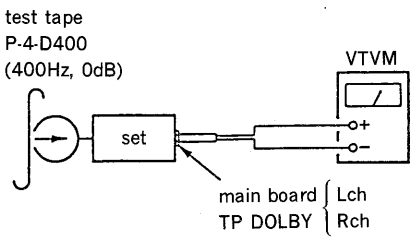
Speed checker	Frequency counter
−1.5 to +2.5%	2,955 to 3,075Hz

Adjustment Location : capstan motor volume

DOLBY Level Adjustment

Setting :

(Dolby NR) button : OFF
SEL (volume) button : Maximum
SEL (balance) button : Center
SEL (bass) button : Center
SEL (treble) button : Center



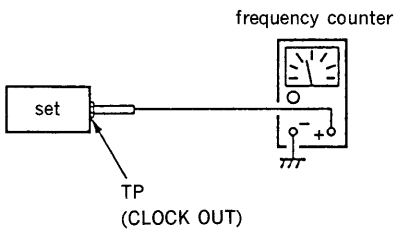
Procedure :

1. Put the set into the FWD PB mode.
2. Adjust RV301 (L-CH) and RV401 (R-CH) so that VTVM reading is $-4.7\ ^{+1.0}_{0}$ dB (0.45 to 0.51V).

Adjustment Location : equalizer board

Microcomputer Clock Adjustment

Setting :



Procedure :

1. Set to the test mode. (See page 20.)
2. Adjust with CT501 for 16,384.0±0.1Hz (61.0351msec± 0.0003μsec) reading on frequency counter.

Adjustment Location : main board

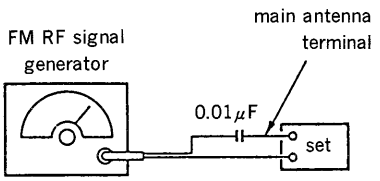
TUNER SECTION 0dB=1μV

Cautions during repair
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan/Stop Level Adjustment

Setting :

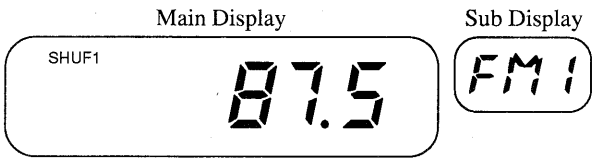
FM button : FM1



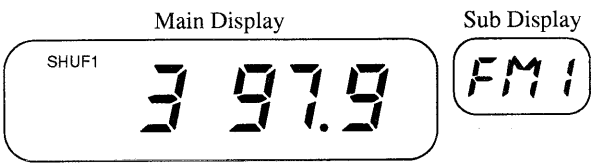
Carrier frequency : 97.9MHz
Output level : 22dB (12.6μV)
Mode : mono
Modulation : no modulation

Procedure :

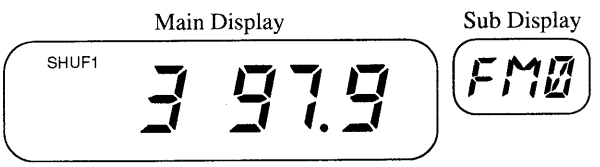
1. Set to the test mode. (See page 20.)
2. Push the [FM] button and set to FM1.



3. Push the preset [3] button.



4. Push the [AMS/SEEK+ ▶▶I] button.
5. Adjust with the volume RV3 on TU1 so that the "FM1" indication turns to "FM0" indication on the sub display window.
   But, in case of already indicated "FM0", turn the RV3 so that put out light "0" indication and adjustment.



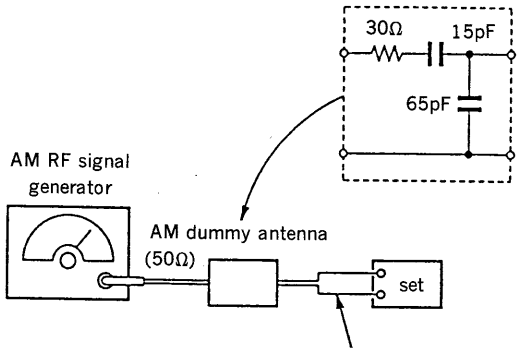
Specification : Stop sensitivity : 22dB±3dB

Note) "0" indication of sub display was align voltage of TP (SD).
TP (SD) voltage 0V →"0" light off
TP (SD) voltage 5V →"0" light on

AM Auto Scan/Stop Level Adjustment

Setting :

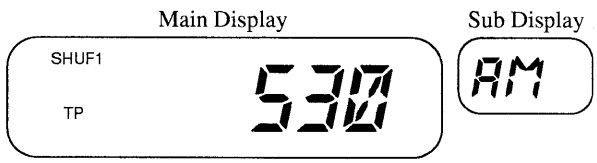
AM button : AM



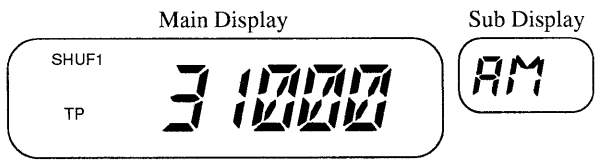
Carrier frequency : 1000kHz
30% amplitude modulation by 400Hz signal
Output level : 33dB (44.7μV)

Procedure :

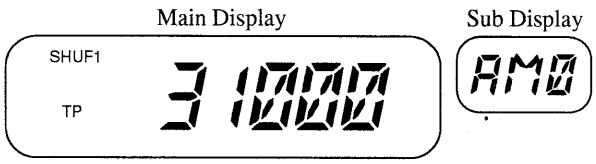
1. Set to the test mode. (See page 20.)
2. Push the [AM] button and set to AM.



3. Push the preset [3] button.



4. Adjust with the volume RV1 on TU1 so that the "AM" indication turns to "AM0" indication on the sub display window.
   But, in case of already indicated "AM0", turn the RV1 so that put out light "0" indication and adjustment.



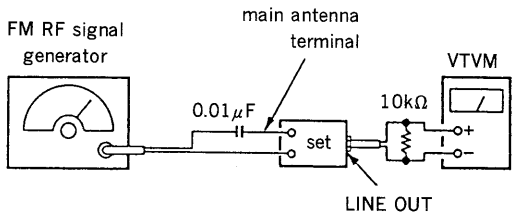
Specification : Stop sensitivity : 33dB±3dB

Note) "0" indication of sub display was align voltage of TP (SD).
TP (SD) voltage 0V →"0" light off
TP (SD) voltage 5V →"0" light on

High Cut Control Effect Adjustment

Setting :

FM button : FM1



Carrier frequency : 97.9MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure :

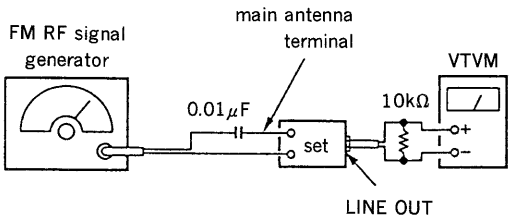
1. Tune the 97.9MHz.
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV2 on TU1 so that the output level is (A)−6dB then signal generator input set to 20dB.

Adjustment Location : main board (TU1)

FM Noise Focus Adjustment

Setting :

FM button : FM1



Carrier frequency : 97.9MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 10kHz, 75kHz deviation

Procedure :

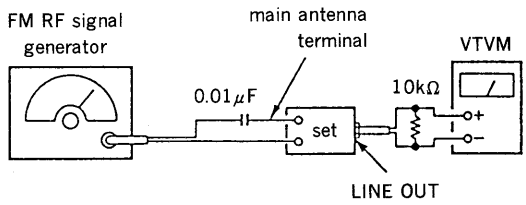
1. Tune the 97.9MHz.
2. The then output level is supposing that (B) dB.
3. Adjust with the volume RV5 on TU1 so that the output level is (B)−30dB then signal generator input set to 20dB.

Adjustment Location : main board (TU1)

FM Stereo Separation (60dB) Adjustment

Setting :

FM button : FM1



Carrier frequency : 97.9MHz
Output level : 70dB (3.2mV)
Mode : stereo
Modulation : main : 1kHz, 33.75kHz deviation (45%)
sub : 1kHz, 33.75kHz deviation (45%)
19kHz pilot : 7.5kHz deviation (10%)

Procedure :

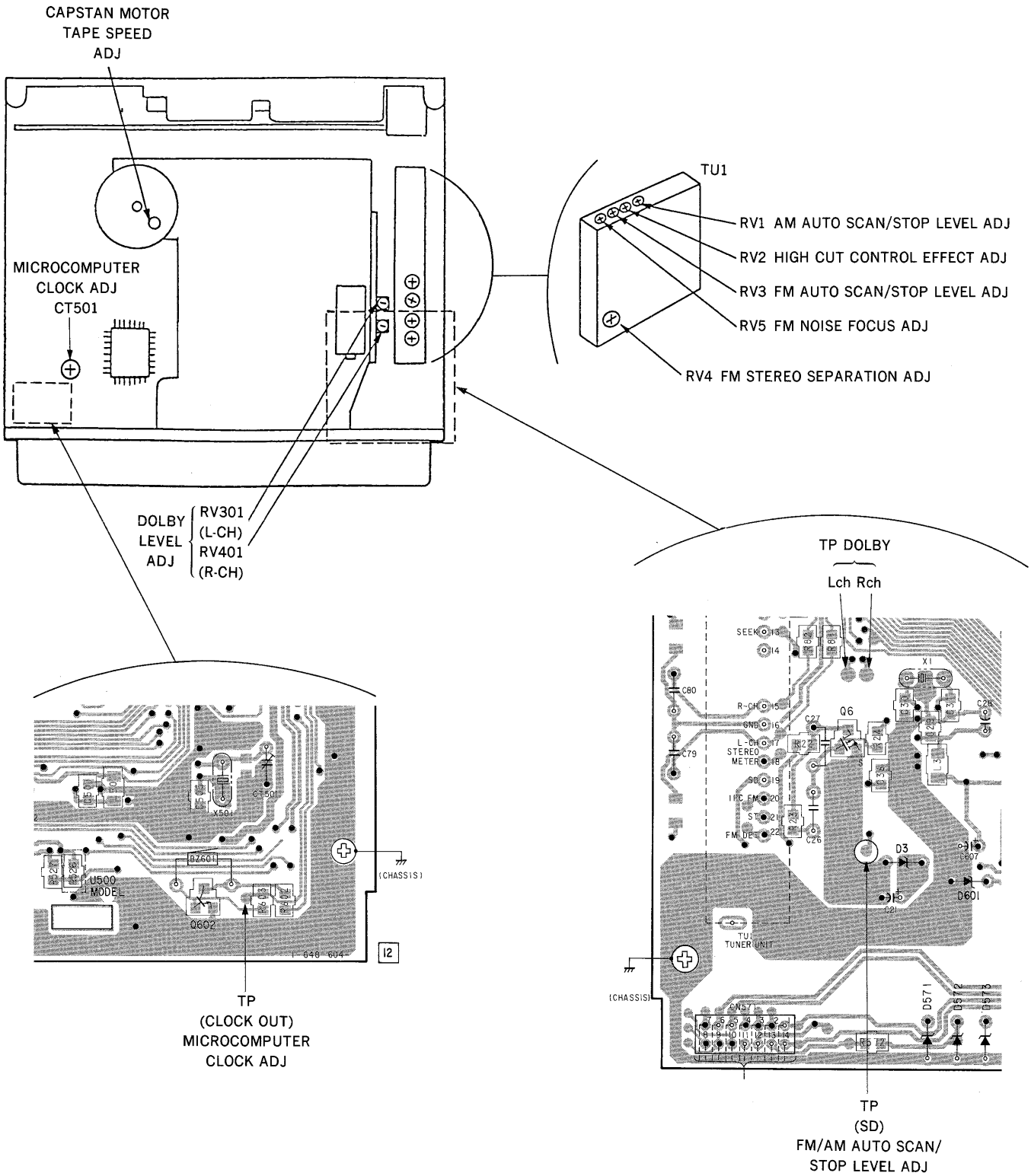
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 for minimum

L-CH Stereo separation : Ⓐ − Ⓑ
R-CH Stereo separation : Ⓒ − Ⓓ
The separations of both channels should be equal.

Specification : Separation more than 30dB

Adjustment Location : main board (TU1)

Adjustment Location :



SECTION 5
DIAGRAMS

5-1. PIN FUNCTIONS

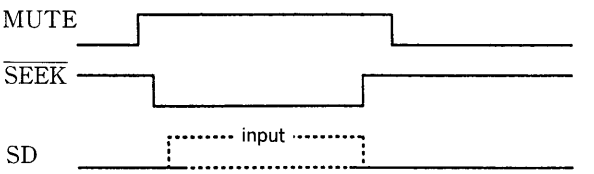
• IC501 μPD75518GF-131-3B9

Pin No.	Signal	Pin Name	I/O	Pin Function
1	KEY-IN0	KI0	I	KEY input
2	P-ON 5V (Ref)	AVDD	—	A/D reference voltage of KEY input.
3, 4	VDD	VDD	—	B/U 5V power
5	KEY-ACTIVE	KEY-ACT	I	ON for A/D port. H : Possible the KEY input.
6	P-ON	P-ON	O	When the POWER ON to output the H. To ON for AUDIO and AMP-REM.
7	ILL-ON	ILL-ON	O	When the ACC ON to output the H. To ON for illumination and LCD.
8	COLOR	COLOR	O	Select the illumination color. H : Green, L : Yellow
9	MUTE	MUTE	O	MUTING output. MUTE ON : H output
10	AUX-MUTE	AUX-MUTE	O	Not use
11	DOLBY $\overline{\text{OFF}}$/ON	DOLBY-$\overline{\text{OFF}}$/ON	O	ON/OFF signal output of DOLBY NR. ON : H, OFF : L
12	DOLBY $\overline{\text{B}}$/C	DOLBY-$\overline{\text{B}}$/C	O	Select signal output of DOLBY NR.
13	SUB-CLK	SUB. VOL-CLK	O	Control output at SUB VOLUME IC304. Control at LCD DRIVER IC701.
14	SUB-DATA	SUB. VOL-DATA	O	
15	SUB-CE	SUB. VOL-CE	O	
16	LCD-INH	LCD-INH	O	
17	—	NC	—	
18	LCD-DATA	LCD-DATA	O	
19	LCD-CLK	LCD-CLK	O	
20	LCD-CD	LCD-CD	O	
21	VOL-CE	VOL-CE	O	Control output at ELECTRONIC VOLUME IC301
22	AMP-ON	AMP-ON	O	Control output at ELECTRONIC VOLUME IC301
23	VOL-CLK	CLK. OUT-VOL	O	Control output at ELECTRONIC VOLUME IC301
24	VOL-DATA	DATA. OUT-VOL	O	
25	TAPE MUTE	TAPE MUTE	O	When to MUTING for TAPE, output H.
26	METAL	MTL	O	METAL : H, NORMAL : L
27	LM-EJECT	EJECT	O	Control output at LOADING MOTOR. EJECT : H
28	LM-LOAD	LOAD	O	Control output at LOADING MOTOR. LOAD : H
29	POS 3	POS 3	I	TAPE POSITION detection input
30	POS 2	POS 2	I	
31	POS 1	POS 1	I	
32	POS 0	POS 0	I	
33	GND	GND	—	GND
34	REEL2	REEL 2	I	TAPE rotation detection input. Only one side input : Judge the no tape. Both no input : Judge the tape end.
35	REEL1	REEL 1	I	
36	N/$\overline{\text{R}}$	NOR/$\overline{\text{REV}}$	I	DIRECTION signal input of TAPE, H : Forward, L : Reverse
37	$\overline{\text{AMS IN}}$	$\overline{\text{AMS-IN}}$	I	AMS signal input. L : Tape sound is present, H : Tape sound is not present
38	PL-OUT	PL-OUT	O	Plunger drive control output. H : ON
39	CM-OUT	CM-OUT	O	For capstan motor output
40	SUB-VOL SELECT	$\overline{\text{SUB. VOL-SEL}}$	O	Select for SUB-VOL function. L : SUB VOL, H : None
41	T-POL	ST-IN	—	Normally, fixed L (GND).

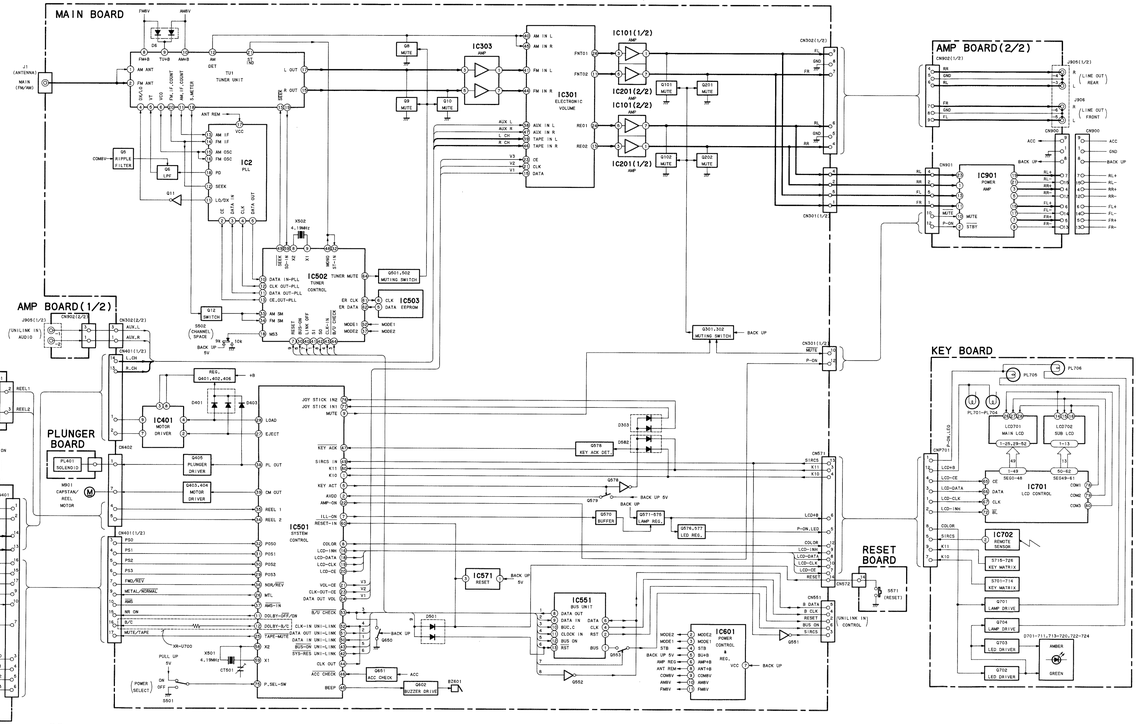
Pin No.	Signal	Pin Name	I/O	Pin Function
42	SYSTEM RESET	$\overline{\text{SYS-RES}}$ UNI-L	O	For UNILINK output
43	BUS ON	$\overline{\text{BUS-ON}}$ UNI-L	O	
44	CLK-OUT	CLK-OUT	O	
45	BEEP	BEEP	O	Buzzer output
46	$\overline{\text{ACC-CHECK}}$	$\overline{\text{ACC-CHECK}}$	I	ACC detection input
47	KEY-ACKIN	$\overline{\text{KEY-ACK}}$	I	When the this set is sleep mode, detect to pressing key.
48	—	JOYSTICK-ACK	—	Not use
49	$\overline{\text{SIRCS IN}}$	$\overline{\text{SIRCS-IN}}$	I	Remote commander signal input
50	DATA IN	DATA-IN UNI. LINK	I	For UNILINK input/output
51	DATA OUT	DATA-OUT UNI. LINK	O	
52	CLK-IN	CLK-IN UNI-LINK	I	
53	B/U-CHECK	$\overline{\text{B/U-CHECK}}$	I	B+ voltage detection input
54	GND	GND	—	GND
55, 56	—	XT1, XT2	—	Not use
57	GND	IC	—	GND
58	X1	X1	O	Crystal oscillator connect pin (4.19MHz)
59	X2	X2	I	
60	$\overline{\text{RESET}}$	$\overline{\text{RESET-IN}}$	I	Microcomputer RESET input
61	ANT ON	ANT-REM	—	Not use
62—64	—	—	—	Not use
65	—	SD-IN	—	Fix the L (GND)
66	—	$\overline{\text{TEL. MUTE}}$	—	Telephone call detection pin. H : Mute −20dB audio signal
67	—	CAUTION-SEL	—	Fix the L (GND)
68	—	NOSE-SW	—	Nose presence detection
69, 70	—	MODE1, MODE2	—	Not use
71	AUDIO SEL 1	AUD. SEL. 1	—	
72	AUDIO SEL 2	AUD. SEL. 0	—	
73	A/D GND	ANALOG. GND	—	GND
74	EQ ON	EQ-ON	O	EQ control output. H : SUB and FAD control, L : No output
75	POWER SELECT	P. SEL-SW	I	P-SEL input. L : P-SEL OFF setting (to cope with cars without accessory position)
76	Joistick-IN2	JOYSTICK-IN2	I	Rotary commander input
77	Joistick-IN1	JOYSTICK-IN1	I	Rotary commander input
78	DSP	$\overline{\text{DSP}}$	I	DSP control select input. L : Use
79	TV	$\overline{\text{TV}}$	I	TV control select input. L : Use
80	KEY-IN1	KI1	I	KEY input

• IC502 μPD75116GF-G50-3BE

Pin No.	Signal	Pin Name	I/O	Pin Function
1, 2	P41, P40	—	—	Not use
3—6	P53—P50	GND	—	Not use (GND)
7	RESET	$\overline{\text{RESET}}$	I	RESET input (L : RESET)
8	X2	X2	I	Ceramic oscillator connect pin (4.19MHz)
9	X1	X1	O	
10	PLL-DI	DATA. IN-PLL	I	DATA input from IC2 PLL-IC LC7216.
11	PLL-DO	DATA. OUT-PLL	O	DATA output to IC2 PLL-IC LC7216.
12	PLL-CK	CLK. OUT-PLL	O	CLOCK output to IC2 PLL-IC LC7216.
13	PLL-CE	CE. OUT-PLL	O	Chip enable output to IC2 PLL-IC LC7216.
14	P73	MS7$\overline{\text{XR}}$/XT	I	MODE select input (PULL-UP 5V)
15	P72	MS6	I	MODE select input (Not use GND)
16	P71	MS5 (E2ROM-RST)	I	
17	P70	MS4 (AM-ST)	I	
18	P83	MS3	I	MODE select input
19	P82	MS2	I	MODE select input (Not use GND)
20	P81	MS1	I	
21	P80	MS0	I	
22	RDS-DI	—	I	Not use (GND)
23	RDS-D-Start	—	I	
24	RDS-ERR	—	I	
25	RDS-Receive	—	I	
26	VSS	VSS	—	GND
27	P13	—	I	Not use (GND)
28	P12	—	I	
29	RDS-CLK	—	I	
30	BUS-ON	$\overline{\text{BUS-ON}}$	I	BUS-ON input from BUS INTERFACE IC501 μPD75518GF.
31	PTH3	—	—	Not use
32	PTH2	$\overline{\text{ST-IN}}$	I	STEREO input
33	Vsm (FM)	FM. SM	I	FM S meter voltage detection
34	Vsm (AM)	AM. SM	I	AM (MW/SW/LW) S meter voltage detection
35, 36	T10, T11	—	—	Not use
37	ANFON	MODE 2	O	ANT-ON (TUNER ON) output
38	$\overline{\text{RDS-RESET}}$	RDS-RST	O	Not use
39	REQUEST	REQUEST	O	BUS INTERFACE request output
40	LINK-OFF	LINK-OFF	O	BUS INTERFACE rink off output
41	S1	S1	I	BUS INTERFACE DATA input
42	S0	S0	O	BUS INTERFACE DATA output
43	SCK	CLK-IN	I	BUS INTERFACE CLOCK input
44	BUP	B/U-CHECK	I	BUCK UP detection input
45	DX/LOCAL	—	O	Not use
46, 47	P22, P21	—	—	Not use
48	N-CH	$\overline{\text{MONO}}$	O	FORCE MONAURAL output
49	$\overline{\text{SEEK}}$ • N-CH	$\overline{\text{SEEK}}$	O	SEEK OUT output
50	P132	—	—	Not use

Pin No.	Signal	Pin Name	I/O	Pin Function
51	$\overline{\text{FM-FE-ON}}$	—	O	Not use
52	$\overline{\text{AM-FE-ON}}$	MODE 1	O	AM power control output
53	P143	—	—	Not use
54	P142	—	—	Not use (GND)
55, 56	P141, P140	—	—	Not use
57	NC	V_{DD}	—	BACK UP +5V
58	SD	V_{DD}	—	IC power
59	SD	SD-IN	I	SD IN pin Decide on stop level of SEEK, AUTO-MEMORY and SCAN, etc. ON AM receipt (MUTE-OFF), output for "L" level. 
60		—	—	Not use (GND)
61	NC E²P-SCK	ER. CLK	O	EEP ROM clock output to IC503 X24C04S8IC7000
62	NC E²P-SDA	ER. DATA	I/O	EEP ROM DATA input to IC503 X24C04S8IC7000
63	P43	—	—	Not use
64	MUTE	TUNER-MUTE	O	MUTING signal output

5-2. BLOCK DIAGRAM



5-3. SEMICONDUCTOR LEAD LAYOUTS

BA3910B-V2

MM1175XF-T1

(TOP VIEW)

CL-155Y/PG-CD

CXA1646Q

(TOP VIEW)

NJM5532M

(Top view)

DTC114TK
DTC314TKH04
DTD113EK
RN1441-A-TE85L
UN211F-TX
UN5111
UN5113
UN5211
2SC2712-YG
2SC4116-GL

DSA3A4

MA111
MA8051-H
MA8062-M

HA12164
HA12174

PST600EMT-T1

FMG1
XN1213

MA142WA

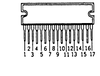
HA13150A
HA13151

RS-30

UPA502T-T1
XN1A312-TX

MA141WK
MA142WK
MA721WK

LB1638M
NJM3404AM-T1
X24C04S8IC7000



(Top view)

TC9240F
μPD75518GF-131-3B9

2SB1115A

MA4039-M
MA4056-L
MA4062-M
MA4068-L
MA4075-M
MA4082-H
MA4091-H
MA4110-M
MA4200

LC7216M

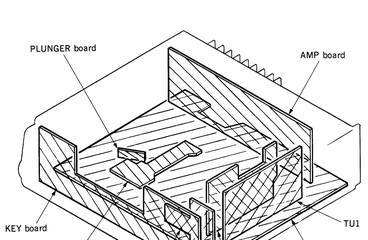
μPD75116GF-G50-3BE

(TOPVIEW)

2SD1802-S

2SK1657-T1B

5-4. CIRCUIT BOARDS LOCATION



5-5. PRINTED WIRING BOARDS —MAIN SECTION— • Refer to page 31 for Semiconductor Lead Layouts.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D3	G-15	IC401	D-3
D4	E-16	(IC401)	K-10
D6	D-14	IC501	G-4
D301	E-10	IC502	G-6
(D301)	K-11	IC503	H-7
D302	B-7	IC571	F-2
(D302)	K-11	IC601	B-20
D303	C-18	IC901	F-28
(D303)	J-12		
D401	F-4	PH201	J-4
D402	D-22	PH202	J-6
D403	F-3		
D404	E-3	Q5	G-10
D405	E-3	Q6	F-14
D501	G-2	Q8	C-9
D502	H-4	Q9	D-10
D503	H-2	Q10	D-10
D505	G-6	Q11	G-10
D551	B-22	Q12	G-9
D552	B-23	Q101	C-9
D553	B-23	Q102	C-9
D554	G-2	Q201	C-9
D555	B-3	(Q201)	J-6
D556	B-23	Q202	C-9
D570	J-31	Q301	C-6
D571	I-15	Q302	C-6
D572	I-15	Q401	D-3
D573	I-15	Q402	D-3
D574	I-16	Q403	D-2
D575	I-16	Q404	F-3
D576	I-16	Q405	E-3
D577	I-17	Q406	F-4
D578	I-17	Q501	H-6
D580	B-16	Q502	F-6
D582	H-8	Q551	G-3
D583	C-3	Q552	C-3
D584	D-3	Q553	B-3
D601	G-15	Q570	F-4
D602	D-20	Q571	B-8
D650	C-21	Q572	A-8
D651	D-4	Q573	A-8
D653	D-21	Q574	A-9
D901	G-25	Q575	B-10
D931	F-30	Q576	G-5
		Q577	I-5
IC2	F-10	Q578	H-5
IC101	E-7	Q579	H-5
IC201	D-7	Q601	G-9
IC301	D-8	Q602	H-22
IC302	D-18	Q650	C-3
IC303	D-9	Q651	F-3

( ): MECHANISM BLOCK

Note:

- ○ : parts extracted from the component side.
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ▒ : Pattern of the rear side.

【MAIN BOARD】(SIDE A)

【MAIN BOARD】(SIDE B)

【AMP BOARD】(SIDE A)

【AMP BOARD】(SIDE B)

【REEL BOARD】

【EQUALIZER BOARD】

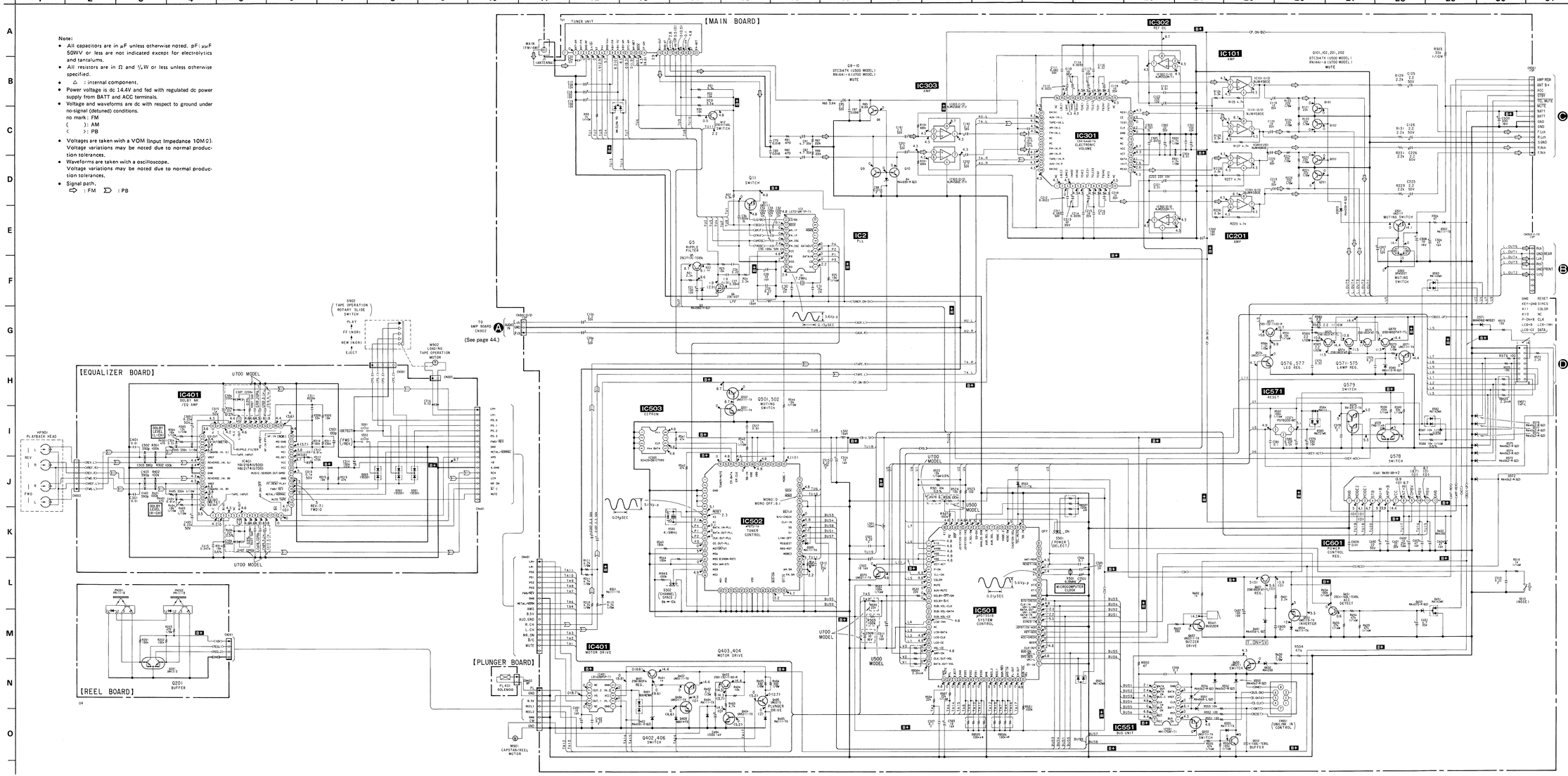
【PLUNGER BOARD】

【RESET BOARD】(SIDE A)

【RESET BOARD】(SIDE B)

5-6. SCHEMATIC DIAGRAM —MAIN SECTION— • Refer to page 51 for IC Block Diagrams.

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ⚠ : internal component.
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  < > : PB
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ⇦ : PB



5-7. SCHEMATIC DIAGRAM —AMP SECTION—

【AMP BOARD】

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminal.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

IC901
HA13126A(U700 MODEL)
HA13151(U500 MODEL)
POWER AMP

L-CH
R-CH

(CHASSIS)

TO MAIN BOARD CN302 (See page 40.) (See page 43.)

TO MAIN BOARD CN301 (See page 43.)

5-8. SCHEMATIC DIAGRAM —PANEL SECTION—

【RESET BOARD】

1	LCD-CLK
2	LCD-INH
3	LCD-DATA
4	LCD-CE
5	SIRCS
6	GND
7	KEY-IN0
8	COLOR
9	KEY-IN1
10	P-ON+B
11	KEY-GND
12	LCD+B

TO MAIN BOARD CN571 (See page 43.)

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.

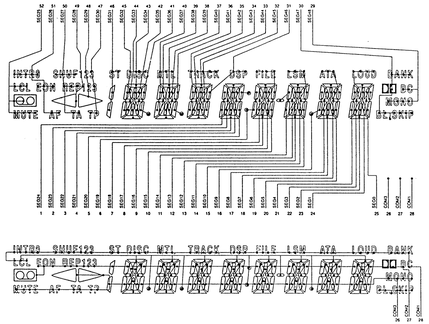
D701-711, 713-720, 722-724
CL-155Y/PG-CD-TL

IC701
TC9240F
LCD DRIVE

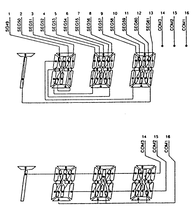
IC702
REMOTE SENSOR

【KEY BOARD】

● LCD701 (MAIN)

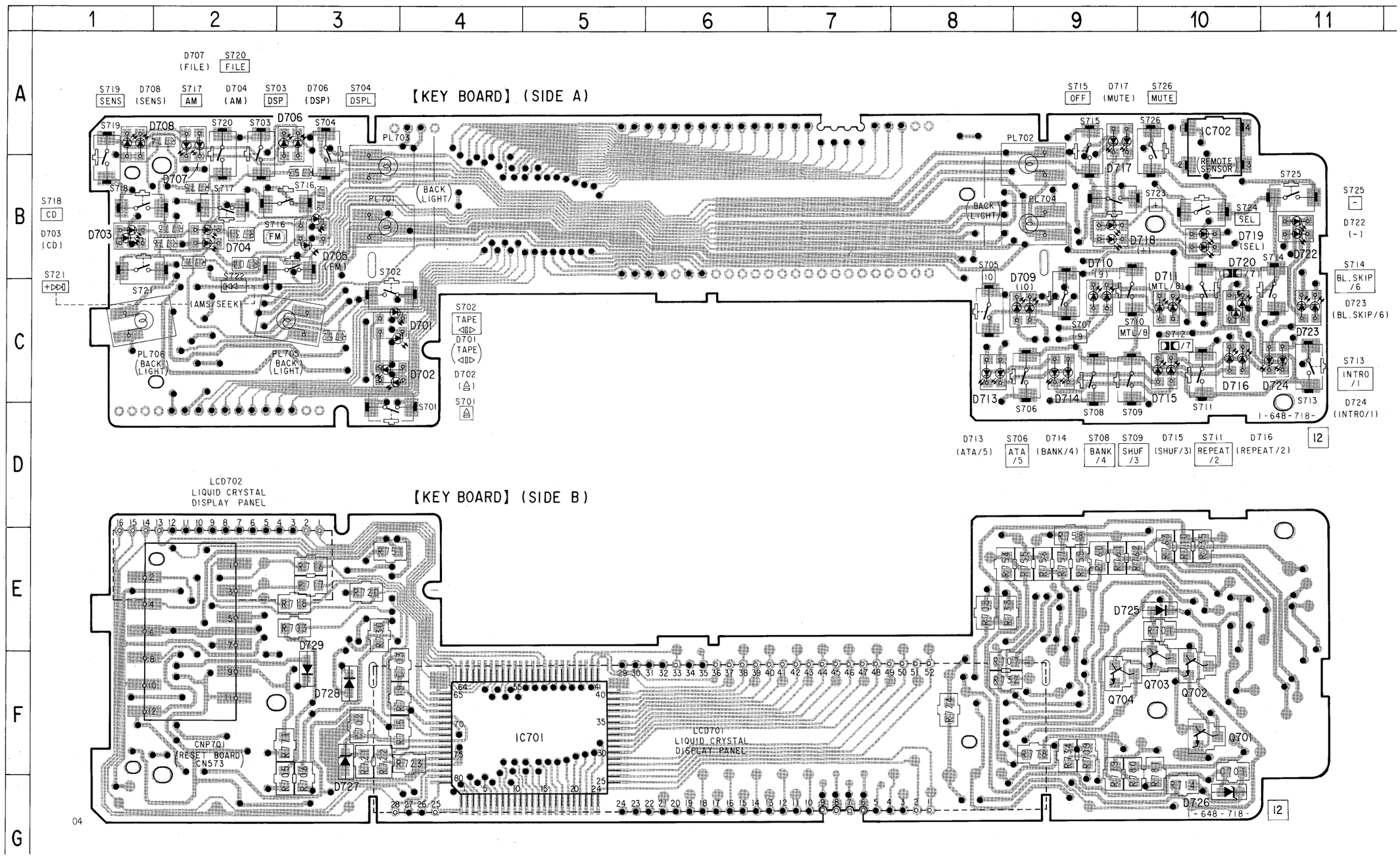


● LCD702 (SUB)



5-9. PRINTED WIRING BOARD —PANEL SECTION—

• Refer to page 31 for Semiconductor Lead Layouts.



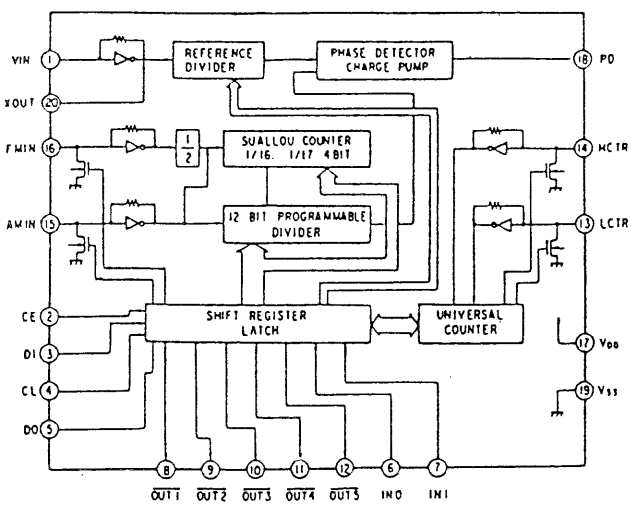
• Semiconductor Location

Ref. No.	Location
D701	C-3
D702	C-3
D703	B-1
D704	B-2
D705	B-3
D706	A-3
D707	A-2
D708	A-1
D709	C-9
D710	C-9
D711	C-10
D713	C-8
D714	C-9
D715	C-10
D716	C-10
D717	A-9
D718	B-9
D719	B-10
D720	C-10
D722	B-11
D723	C-11
D724	C-11
D725	E-10
D726	G-10
D727	F-3
D728	F-3
D729	F-3
IC701	F-5
IC702	A-10
Q701	F-10
Q702	F-10
Q703	F-10
Q704	F-9

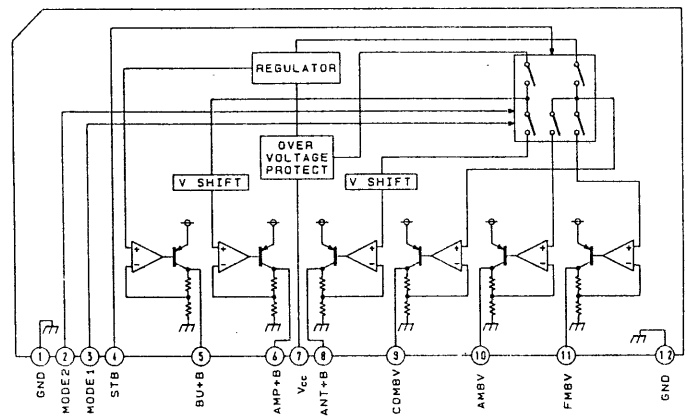
Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.

• IC Block Diagrams

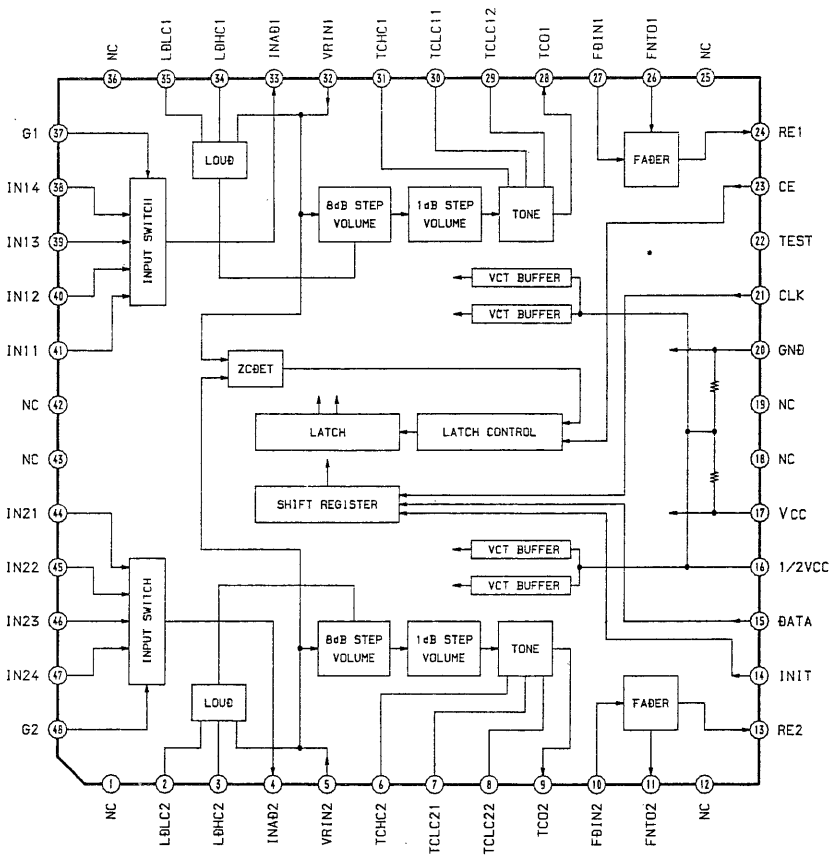
IC2 LC7216M



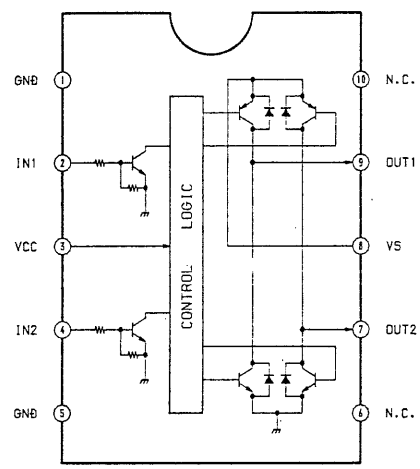
IC601 BA3910A-V2



IC301 CXA1646Q



IC401 LB1638M

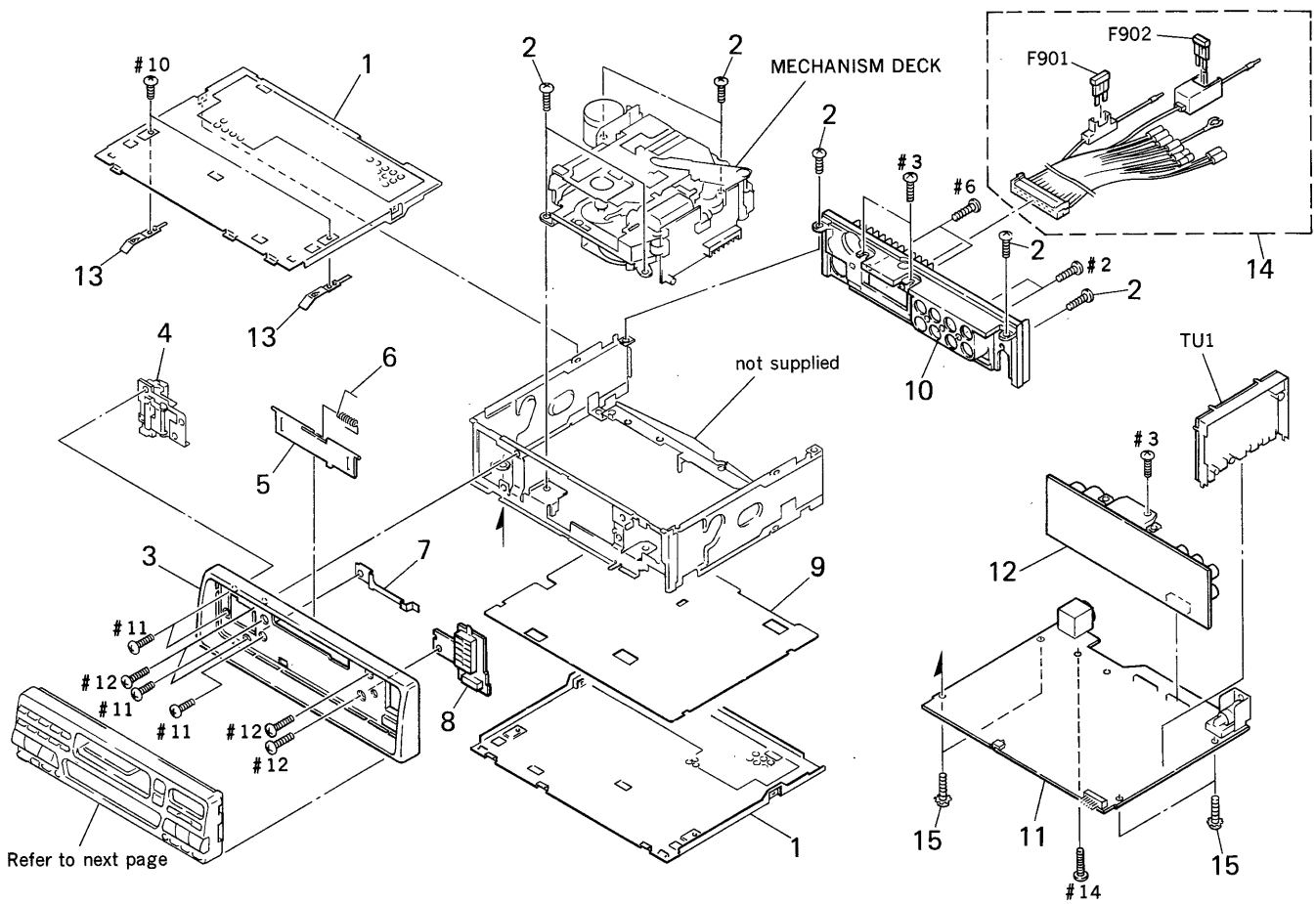


SECTION 6
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

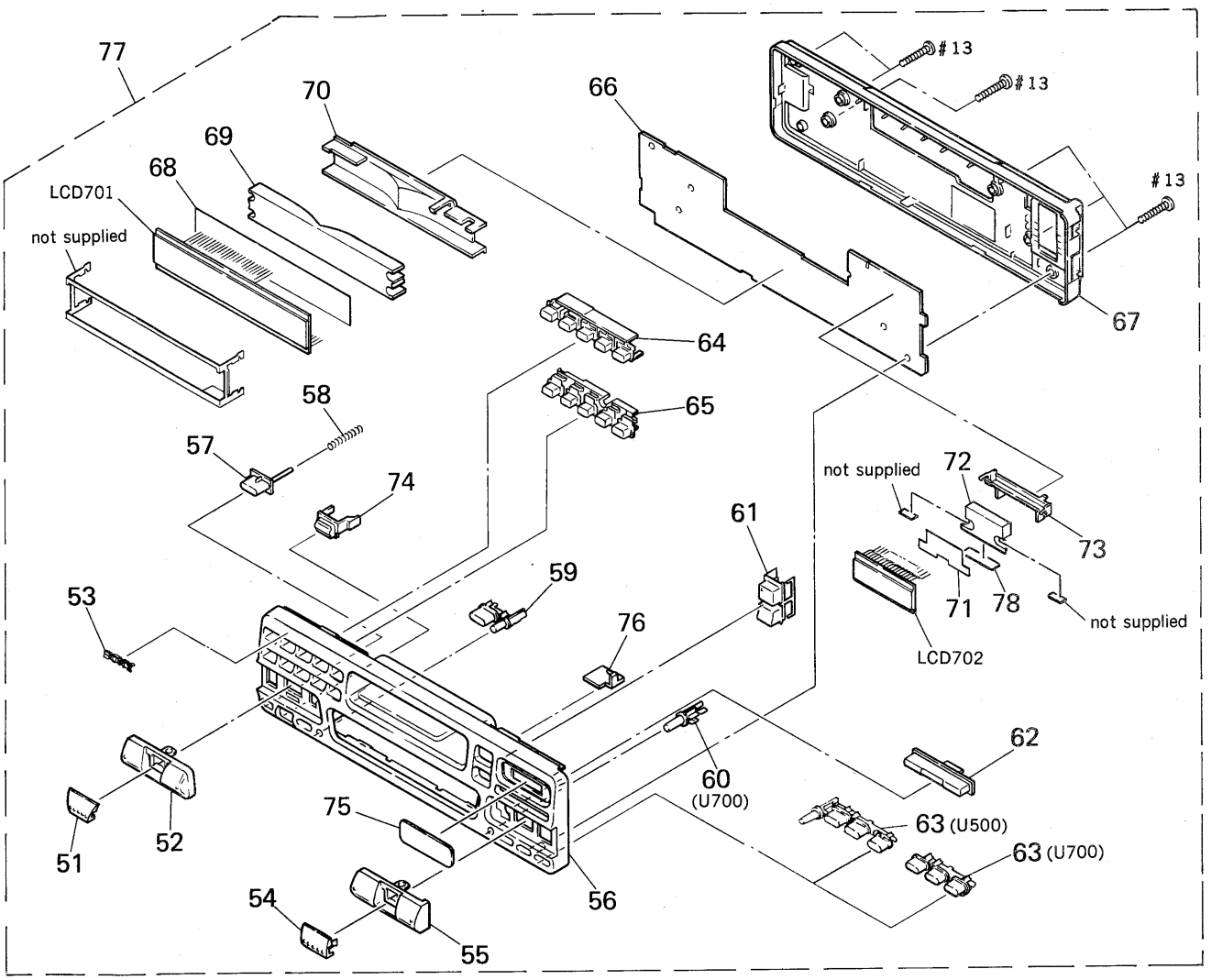
6-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-904-249-01	COVER	
2	3-906-712-01	SCREW (2.6X6) (CU), +PTT	
3	3-904-179-01	PANEL, SUB	
4	X-3366-931-1	LOCK ASSY	
5	3-389-269-01	DOOR, CASSETTE (XR-U700)	
5	3-389-269-61	DOOR, CASSETTE (XR-U500)	
6	3-377-892-01	SPRING (C DOOR), TORSION	
7	3-904-181-01	SPRING (SW)	
* 8	1-648-719-12	RESET BOARD	
* 9	3-904-180-01	INSULATOR	
* 10	3-388-866-02	HEAT SINK	

Ref. No.	Part No.	Description	Remark
* 11	A-3295-786-A	MAIN BOARD, COMPLETE (XR-U700)	
* 11	A-3295-796-A	MAIN BOARD, COMPLETE (XR-U500)	
* 12	A-3295-558-A	AMP BOARD, COMPLETE (XR-U700)	
* 12	A-3295-568-A	AMP BOARD, COMPLETE (XR-U500)	
* 13	3-386-597-01	PLATE, LOCK	
14	1-751-263-21	CORD (WITH CONNECTOR)	
15	3-906-713-01	SCREW (+PTT), GROUND POINT	
F901	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A)	
F902	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A)	
TU1	A-3282-003-A	TUNER UNIT (TUX-001A)	

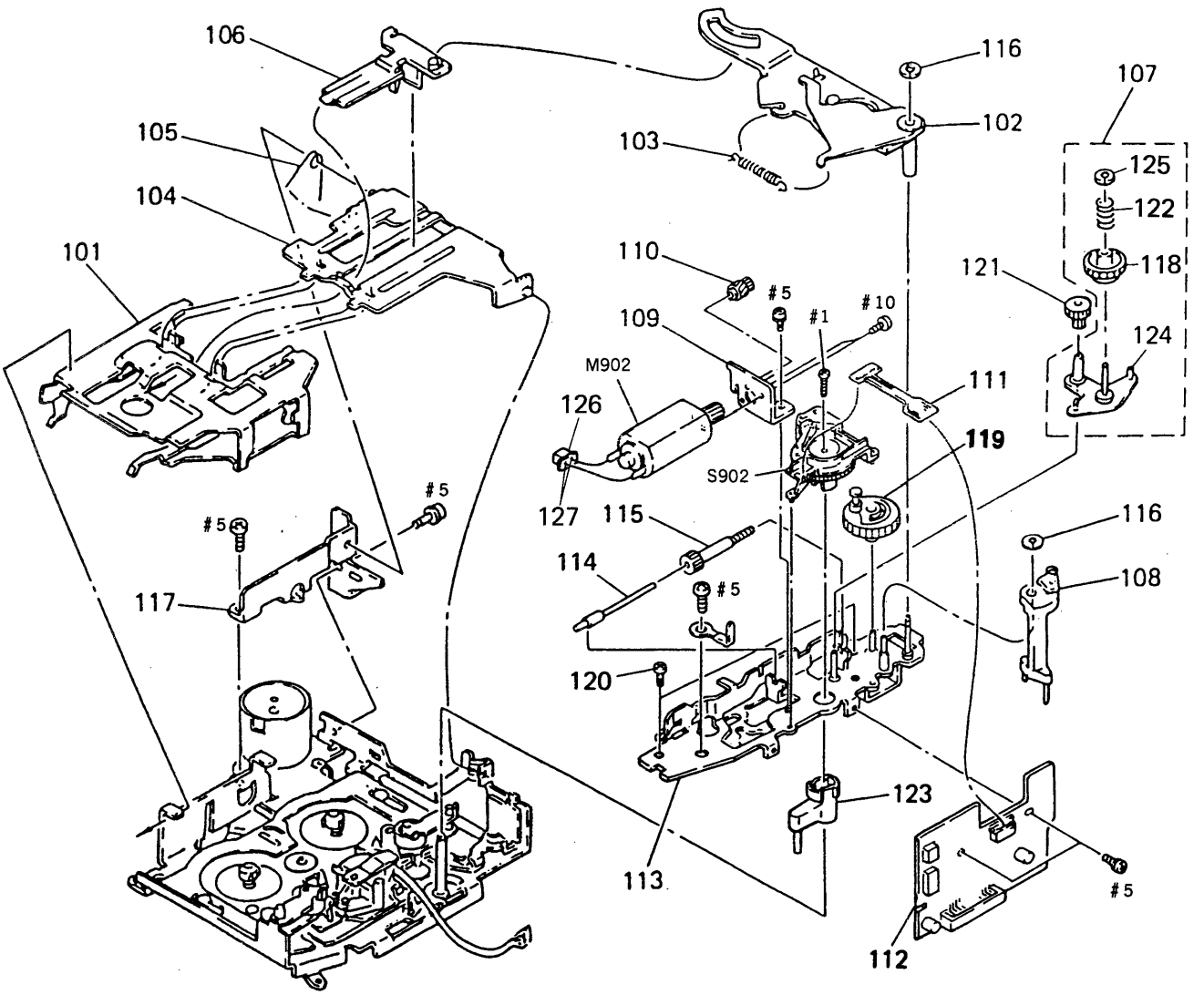
6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-389-660-11	BUTTON (SELECT)	
52	3-389-668-11	BUTTON (+ -)	
53	3-904-194-01	EMBLEM (NO. 2.5), SONY	
54	3-389-664-52	BUTTON (AM)	
55	3-389-666-32	BUTTON (FM, CD)	
56	3-904-190-52	PANEL (B), FRONT (XR-U700)	
56	3-904-190-62	PANEL (B), FRONT (XR-U500)	
57	3-904-245-01	BUTTON (RELEASE)	
58	3-904-193-01	SPRING (RELEASE)	
59	3-904-243-11	BUTTON (MUTE)	
60	3-904-244-01	BUTTON (DSPL) (XR-U700)	
61	3-389-661-11	BUTTON (EJECT B)	
62	3-389-665-11	BUTTON (SEEK)	
63	3-389-670-01	BUTTON (FILE) (XR-U500)	
63	3-389-671-01	BUTTON (DSP) (XR-U700)	
64	3-389-658-11	BUTTON (1-5)	
65	3-389-662-11	BUTTON (6-10)	

Ref. No.	Part No.	Description	Remark
* 66	A-3222-591-A	KEY BOARD, COMPLETE	
67	3-904-191-01	PANEL, FRONT BACK	
* 68	3-389-753-01	REFLECTOR (M), SHEET	
* 69	3-389-673-01	PLATE (M:LCD), LIGHT GUIDE	
* 70	3-389-672-01	HOLDER (M:LCD)	
* 71	3-904-248-01	REFLECTOR (SB), SHEET	
* 72	3-904-247-01	PLATE (SB:LCD), LIGHT GUIDE	
73	3-904-246-01	HOLDER (SB:LCD)	
74	3-389-669-01	FILTER (RAY CATCHER)	
75	3-389-674-02	PLATE (B), INDICATION	
* 76	3-904-632-01	PLATE (C DOOR), LIGHT GUIDE	
* 77	A-3252-802-A	PANEL ASSY, FRONT (XR-U700)	
* 77	A-3252-804-A	PANEL ASSY, FRONT (XR-U500)	
* 78	3-905-675-01	REFLECTOR (MIRROR)	
LCD701	1-810-094-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD702	1-810-095-11	DISPLAY PANEL, LIQUID CRYSTAL	

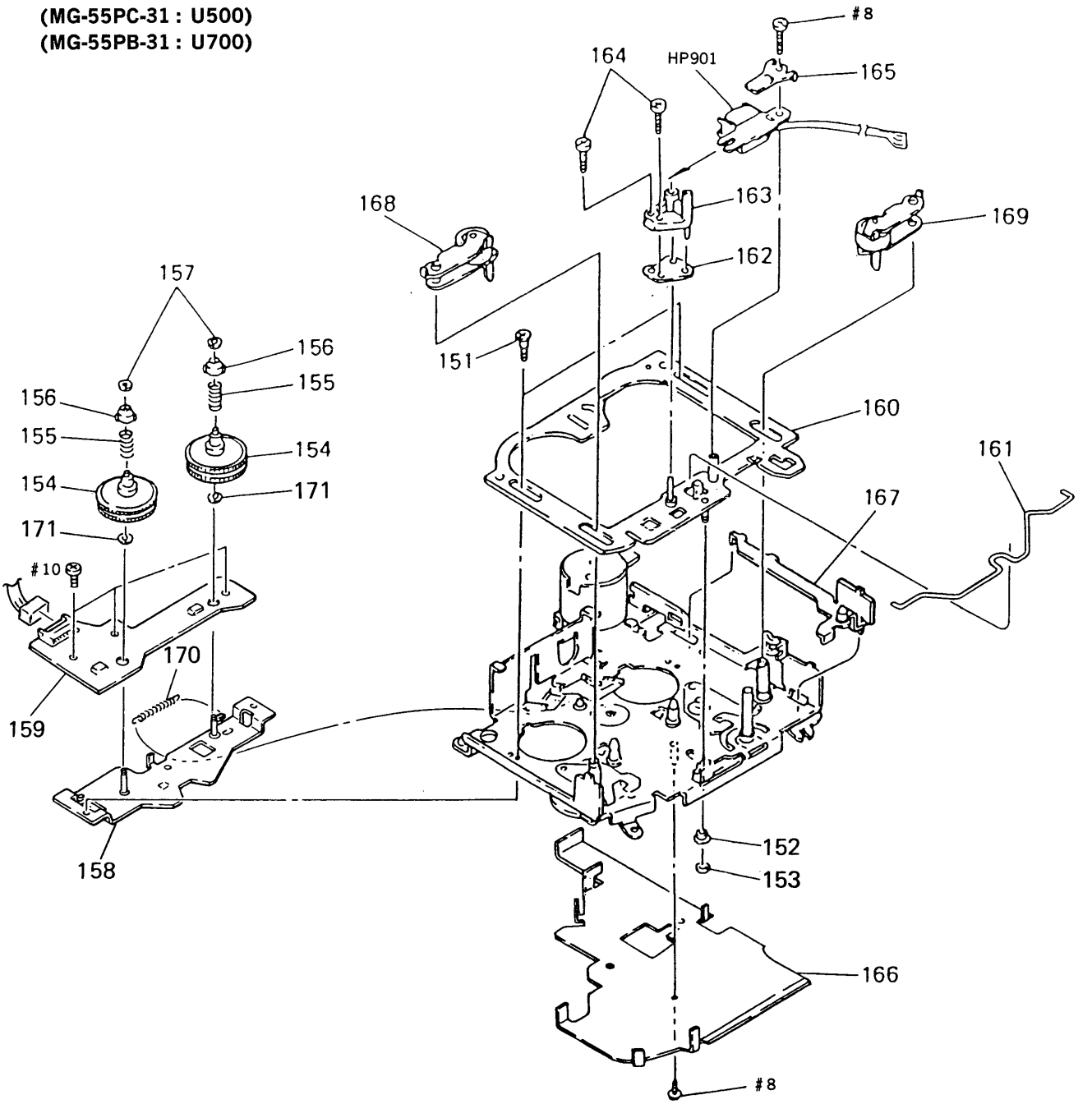
6-3. MECHANISM DECK SECTION 1
(MG-55PC-31 : U500)
(MG-55PB-31 : U700)



Ref. No.	Part No.	Description	Remark
* 101	3-344-103-21	HOUSING, CASSETTE	
* 102	X-3344-121-1	ARM ASSY, SUCTION	
103	3-344-216-01	SPRING (SUCTION ARM), TENSION	
* 104	X-3362-262-1	HANGER (F) ASSY, HOUSING	
105	3-344-113-03	SPRING	
106	3-344-118-01	CATCHER	
* 107	A-3239-954-A	GEAR ASSY, DRIVING ARM	
* 108	3-375-458-01	ARM (M), REVERSE	
* 109	X-3344-142-2	BRACKET (F) ASSY, MOTOR	
110	3-344-281-01	GEAR (A), DRIVING	
111	1-635-519-12	ROTARY SWITCH FLEXIBLE BOARD	
* 112	A-3295-492-A	EQUALIZER BOARD, COMPLETE (XR-U700)	
* 112	A-3295-493-A	EQUALIZER BOARD, COMPLETE (XR-U500)	
* 113	X-3362-260-3	CHASSIS (F) ASSY, MCU	
* 114	3-344-157-01	SHAFT, DRIVING GEAR (B)	

Ref. No.	Part No.	Description	Remark
115	3-344-156-01	GEAR (B), DRIVING	
116	3-344-222-01	WASHER	
* 117	3-368-239-13	BRACKET (U), HANGER	
118	3-344-165-02	GEAR (B), FRICTION	
119	X-3344-119-1	GEAR ASSY (L), LDG	
120	3-703-502-21	SCREW	
121	3-344-108-01	GEAR (FRICTION A)	
122	3-344-137-01	SPRING, COMPRESSION	
123	X-3344-117-1	ARM ASSY (L), MODE	
124	X-3344-109-4	ARM ASSY, DRIVING	
125	3-662-058-00	WASHER, SLIT	
* 126	1-565-121-11	HOUSING, CONNECTOR 2P	
* 127	1-565-163-11	TERMINAL, SOLDERLESS	
M902	X-3362-826-1	MOTOR ASSY, LOADING TAPE OPERATION	
S902	1-572-397-11	SWITCH, ROTARY SLIDE (TAPE OPERATION)	

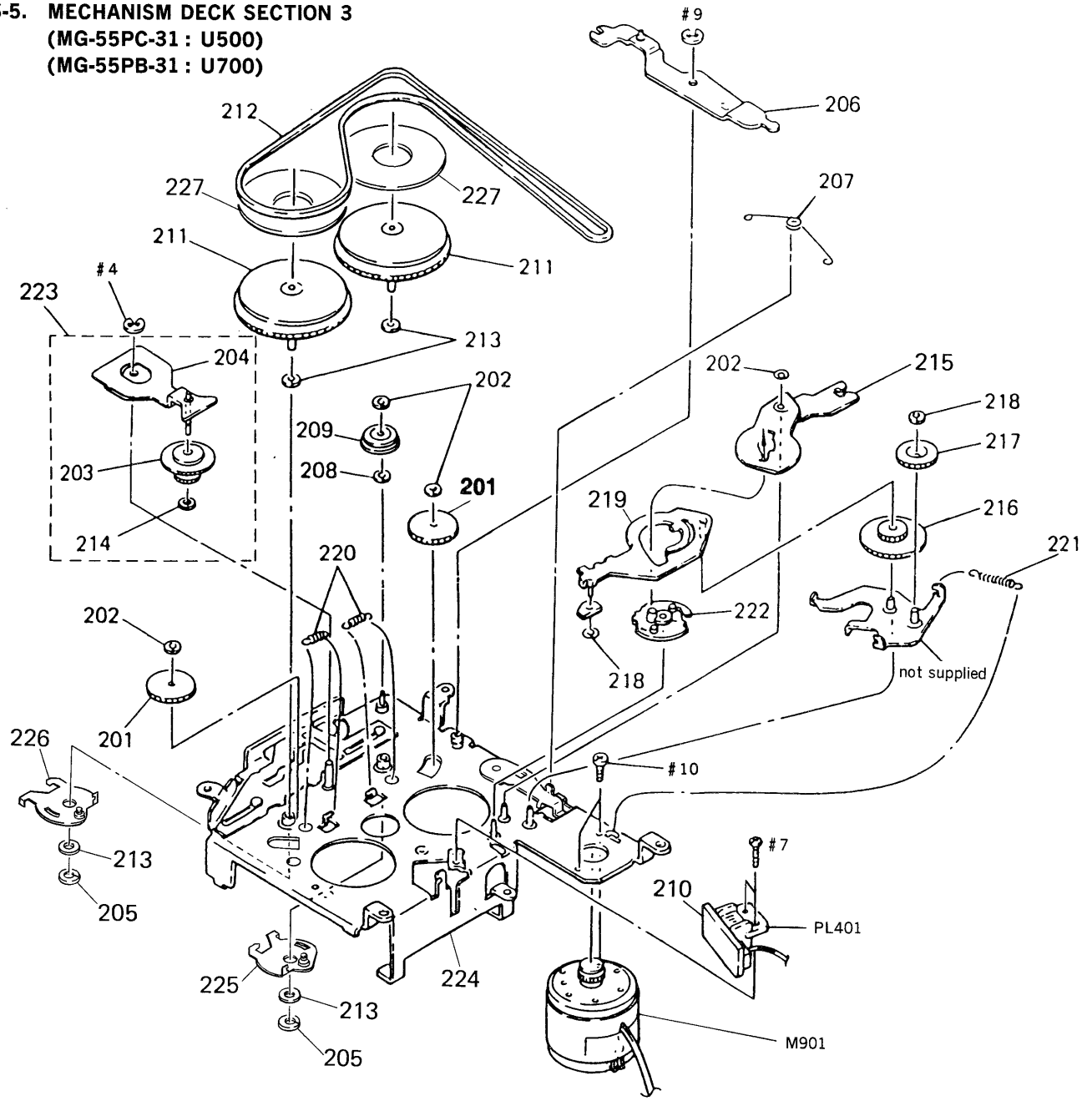
6-4. MECHANISM DECK SECTION 2
(MG-55PC-31 : U500)
(MG-55PB-31 : U700)



Ref. No.	Part No.	Description	Remark
151	3-344-110-01	SCREW (HB), STEP	
152	3-344-116-01	ROLLER (A), H/B	
153	3-344-222-01	WASHER	
154	X-3362-214-1	TABLE (F) ASSY, REEL	
155	3-344-143-01	SPRING (BT), COMPRESSION	
156	3-365-725-01	CAP (F), REEL	
157	3-364-151-01	WASHER	
* 158	X-3344-144-2	BRACKET (F) ASSY, REEL TABLE	
* 159	1-648-246-11	REEL BOARD	
* 160	X-3366-042-2	BASE ASSY (F), HEAD	
* 161	3-363-909-01	SPRING (R), PINCH PRESS	

Ref. No.	Part No.	Description	Remark
162	3-344-128-06	SEAM, DAH	
163	3-372-170-01	ARM, DAH	
164	3-364-122-01	SCREW (M1.4X5.5), ADJ	
165	3-344-130-04	RETAINER, HEAD	
* 166	3-344-220-01	COVER, MD	
* 167	3-382-483-01	LEVER (RVS JOINT)	
168	X-3344-115-1	ARM (R) ASSY, PINCH	
169	X-3344-116-1	ARM (F) ASSY, PINCH	
170	3-344-217-01	SPRING (CAM LOCK LEVER), TENSION	
171	3-701-437-01	POLY-SLIDER (A)	
HP901	1-543-726-41	HEAD, MAGNETIC (PLAYBACK)	

6-5. MECHANISM DECK SECTION 3
(MG-55PC-31 : U500)
(MG-55PB-31 : U700)



Ref. No.	Part No.	Description	Remark
201	3-376-927-01	GEAR (PLAY)	
202	3-344-222-01	WASHER	
203	X-3344-102-1	GEAR ASSY, FR	
* 204	X-3344-101-6	ARM ASSY, FR	
205	3-364-151-01	WASHER	
* 206	X-3344-139-3	ARM ASSY, POWER	
207	3-344-279-01	SPRING, BUFFER	
208	3-701-436-01	WASHER, 1.6	
209	3-371-905-01	PULLEY (M), MIDWAY (XR-U500)	
209	3-371-971-01	PULLEY (P), MIDWAY (XR-U700)	
* 210	1-648-247-11	PLUNGER BOARD	
211	3-386-047-11	FLYWHEEL (D) (XR-U500)	
211	3-389-621-02	FLYWHEEL (Z) (XR-U700)	
212	3-387-987-01	BELT	
213	3-701-437-01	POLY-SLIDER (A)	
214	3-344-224-01	WASHER	

Ref. No.	Part No.	Description	Remark
* 215	X-3344-114-1	LEVER ASSY, RVS	
216	3-344-146-01	GEAR (RVS-B)	
217	3-344-147-01	GEAR (RVS-A)	
218	3-344-223-01	WASHER	
219	X-3344-107-1	LEVER ASSY (F6), CAM LOCK	
220	3-344-218-02	SPRING (PLAY ARM), TENSION	
221	3-344-215-01	SPRING, TENSION	
222	3-389-171-01	GEAR (RVS CAM)	
223	A-3239-947-A	GEAR SUB ASSY, FR	
* 224	X-3366-043-2	CHASSIS (L) ASSY, MECHANICAL	
* 225	X-3366-402-1	ARM ASSY (PLAY F)	
* 226	X-3366-403-1	ARM ASSY (PLAY R)	
227	3-907-512-01	SHEET (FLYWHEEL) (XR-U700)	
M901	X-3344-136-3	MOTOR SUB ASSY, CAPSTAN/REEL	
PL401	1-454-461-11	SOLENOID, PLUNGER	

SECTION 7
ELECTRICAL PARTS LIST

AMP **EQUALIZER**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description			Remark
*	A-3295-558-A	AMP BOARD, COMPLETE (XR-U700)			
*	A-3295-568-A	AMP BOARD, COMPLETE (XR-U500)			
		**********			
	7-621-770-67	SCREW +PTT 2.6X6 (S)			
		< CAPACITOR >			
C901	1-104-889-91	ELECT	2200uF	20%	16V
C902	1-104-890-91	ELECT	2200uF	20%	16V
C903	1-104-646-91	CERAMIC (XR-U700)	2.2uF	20%	50V
C903	1-136-165-00	FILM (XR-U500)	0.1uF	5%	50V
C904	1-126-059-11	ELECT	10uF	20%	50V
C905	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C911-914					
	1-136-165-00	FILM	0.1uF	5%	50V
C915	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C921-924					
	1-136-165-00	FILM	0.1uF	5%	50V
C925	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C931	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C941-944					
	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
* CN900	1-695-244-21	PLUG, CONNECTOR 15P			
* CN901	1-695-201-11	PLUG, CONNECTOR 15P			
CN902	1-580-914-11	PLUG, CONNECTOR 12P			
		< DIODE >			
D901	8-719-945-59	DIODE DSA3A4			
D931	8-719-034-46	DIODE MA4062-M(QZ)			
		< IC >			
IC901	8-759-160-00	IC HA13151 (XR-U500)			
IC901	8-759-159-99	IC HA13150A (XR-U700)			
		< JACK >			
J905	1-691-684-11	JACK, PIN 6P (UNILINK IN AUDIO/LINE OUT REAR/FRONT)			

Ref.No.	Part No.	Description			Remark
		< RESISTOR >			
R911-914					
	1-208-373-41	METAL GLAZE	2.2	2%	1/8W
R915	1-208-502-41	METAL GLAZE	4.7K	2%	1/8W
R916	1-208-510-41	METAL GLAZE	10K	2%	1/8W
R921-924					
	1-208-373-41	METAL GLAZE	2.2	2%	1/8W
R925	1-208-502-41	METAL GLAZE	4.7K	2%	1/8W
R926	1-208-510-41	METAL GLAZE	10K	2%	1/8W
R931	1-216-049-00	METAL CHIP	1K	5%	1/10W
R941	1-208-510-41	METAL GLAZE	10K	2%	1/8W
R942	1-208-494-41	METAL GLAZE	2.2K	2%	1/8W
**********					
*	A-3295-492-A	EQUALIZER BOARD, COMPLETE (XR-U700)			
*	A-3295-493-A	EQUALIZER BOARD, COMPLETE (XR-U500)			
		**********			
		< CAPACITOR >			
C301	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C302	1-104-534-91	FILM CHIP	390PF	5%	50V
C303	1-104-534-91	FILM CHIP	390PF	5%	50V
C304	1-104-551-11	FILM CHIP	0.01uF	5%	16V
C305	1-126-189-11	ELECT	0.22uF	20%	50V
C306-308					
	1-104-543-11	FILM CHIP (XR-U700)	0.0022uF	5%	50V
C309	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C310	1-104-563-11	FILM CHIP (XR-U700)	0.1uF	5%	16V
C311	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C312	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C313	1-126-187-11	ELECT	0.1uF	20%	50V
C314	1-128-393-11	ELECT	100uF	20%	10V
C315	1-126-193-11	ELECT	1uF	20%	50V
C316	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C401	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C402	1-104-534-91	FILM CHIP	390PF	5%	50V
C403	1-104-534-91	FILM CHIP	390PF	5%	50V
C404	1-104-551-11	FILM CHIP	0.01uF	5%	16V
C405	1-126-189-11	ELECT	0.22uF	20%	50V

EQUALIZER KEY

Ref. No.	Part No.	Description			Remark
C406-408					
	1-104-543-11	FILM CHIP (XR-U700)	0.0022uF	5%	50V
C409	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C410	1-104-563-11	FILM CHIP (XR-U700)	0.1uF	5%	16V
C415	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN301	1-569-806-21	CONNECTOR, FPC 5P			
CN302	1-565-770-11	CONNECTOR, FPC (1.0MM) (ZIF) 6P			
* CN303	1-691-741-21	PIN, CONNECTOR (PC BOARD) 2P			
* CN401	1-750-217-21	CONNECTOR (WAFER) 18P			
		< DIODE >			
D301	8-719-404-35	DIODE MA141WK			
D302	8-719-404-35	DIODE MA141WK			
D303	8-719-404-35	DIODE MA141WK			
		< IC >			
IC401	8-759-161-01	IC HA12164 (XR-U500)			
IC401	8-759-160-99	IC HA12174 (XR-U700)			
		< RESISTOR >			
R301	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R302	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R303	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R304	1-208-468-61	METAL GLAZE	18K	2%	1/10W
R305	1-218-764-11	METAL CHIP	330K	0.5%	1/10W
R306	1-218-724-11	METAL CHIP (XR-U700)	22K	0.5%	1/16W
R307	1-218-313-11	METAL CHIP (XR-U700)	560	0.5%	1/16W
R308	1-216-839-11	METAL CHIP	33K	5%	1/16W
R309	1-216-836-11	METAL CHIP	18K	5%	1/16W
R310	1-216-845-11	METAL CHIP	100K	5%	1/16W
R311	1-216-851-11	METAL CHIP	330K	5%	1/16W
R312	1-216-853-11	METAL CHIP	470K	5%	1/16W
R313	1-216-841-11	METAL CHIP	47K	5%	1/16W
R314	1-218-722-11	METAL CHIP	18K	0.5%	1/16W
R315	1-216-833-11	METAL CHIP	10K	5%	1/16W
R401	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R402	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R403	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R404	1-208-468-61	METAL GLAZE	18K	5%	1/10W
R405	1-218-764-11	METAL CHIP	330K	2%	1/10W
R406	1-218-724-11	METAL CHIP (XR-U700)	22K	0.5%	1/16W
R407	1-218-313-11	METAL CHIP (XR-U700)	560	0.5%	1/16W
		< VARIABLE RESISTOR >			
RV301	1-241-552-11	RES, ADJ CERMET 470			
RV401	1-241-552-11	RES, ADJ CERMET 470			
		< SWITCH >			
S301	1-570-953-11	SWITCH, PUSH (1 KEY) (DETECT)			
S302	1-570-953-11	SWITCH, PUSH (1 KEY) (FWD/REV)			
**********					
*	A-3222-591-A	KEY BOARD, COMPLETE **********			
*	3-389-672-01	HOLDER (M:LCD)			
*	3-389-673-01	PLATE (M:LCD), LIGHT GUIDE			
*	3-389-753-01	REFLECTOR (M), SHEET			
*	3-904-246-01	HOLDER (SB:LCD)			
*	3-904-247-01	PLATE (SB:LCD), LIGHT GUIDE			
*	3-904-248-01	REFLECTOR (SB), SHEET			
*	3-905-675-01	REFLECTOR (MIRROR)			
		< CAPACITOR >			
C701	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C702	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C703	1-164-232-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
* CNP701	1-691-557-21	PIN, CONNECTOR 12P			
		< DIODE >			
D701	8-719-987-45	LED CL-155Y/PG-CD (TAPE ◁▯▷)			
D702	8-719-987-45	LED CL-155Y/PG-CD (⏏)			
D703	8-719-987-45	LED CL-155Y/PG-CD (CD)			
D704	8-719-987-45	LED CL-155Y/PG-CD (AM)			
D705	8-719-987-45	LED CL-155Y/PG-CD (FM)			
D706	8-719-987-45	LED CL-155Y/PG-CD (DSP)			
D707	8-719-987-45	LED CL-155Y/PG-CD (FILE)			
D708	8-719-987-45	LED CL-155Y/PG-CD (SENS)			
D709	8-719-987-45	LED CL-155Y/PG-CD (10)			
D710	8-719-987-45	LED CL-155Y/PG-CD (9)			
D711	8-719-987-45	LED CL-155Y/PG-CD (MTL/8)			
D713	8-719-987-45	LED CL-155Y/PG-CD (ATA/5)			
D714	8-719-987-45	LED CL-155Y/PG-CD (BANK/4)			
D715	8-719-987-45	LED CL-155Y/PG-CD (SHUF/3)			
D716	8-719-987-45	LED CL-155Y/PG-CD (REPEAT/2)			
D717	8-719-987-45	LED CL-155Y/PG-CD (MUTE)			
D718	8-719-987-45	LED CL-155Y/PG-CD (+)			

Ref. No.	Part No.	Description	Remark
D719	8-719-987-45	LED CL-155Y/PG-CD (SEL)	
D720	8-719-987-45	LED CL-155Y/PG-CD (□□/7)	
D722	8-719-987-45	LED CL-155Y/PG-CD (-)	
D723	8-719-987-45	LED CL-155Y/PG-CD (BL. SKIP/6)	
D724	8-719-987-45	LED CL-155Y/PG-CD (INTRO/1)	
D725	8-719-404-49	DIODE MA111	
D726	8-719-422-43	DIODE MA8051-H	
D727	8-719-422-43	DIODE MA8051-H	
D728	8-719-404-49	DIODE MA111	
D729	8-719-404-49	DIODE MA111	
		< IC >	
IC701	8-759-246-16	IC TC9240F	
IC702	8-759-194-76	IC RS-30	
		< LIQUID CRYSTAL DISPLAY >	
LCD701	1-810-094-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD702	1-810-095-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< PILOT LAMP >	
PL701	1-517-181-11	LAMP, PILOT	
PL702	1-517-181-11	LAMP, PILOT	
PL703	1-517-181-21	LAMP, PILOT	
PL704	1-517-181-21	LAMP, PILOT	
PL705	1-517-181-11	LAMP, PILOT	
PL706	1-517-181-21	LAMP, PILOT	
		< TRANSISTOR >	
Q701-704			
	8-729-904-66	TRANSISTOR DTD113EK	
		< RESISTOR >	
R701	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R703	1-216-039-00	METAL CHIP 390 5% 1/10W	
R704	1-216-033-00	METAL CHIP 220 5% 1/10W	
R705	1-216-033-00	METAL CHIP 220 5% 1/10W	
R706	1-216-031-00	METAL CHIP 180 5% 1/10W	
R707	1-216-033-00	METAL CHIP 220 5% 1/10W	
R708	1-216-029-00	METAL CHIP 150 5% 1/10W	
R709	1-216-029-00	METAL CHIP 150 5% 1/10W	
R710	1-216-033-00	METAL CHIP 220 5% 1/10W	
R714	1-216-041-00	METAL CHIP 470 5% 1/10W	
R715	1-216-041-00	METAL CHIP 470 5% 1/10W	
R716-718			
	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R719	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R720	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R721-723			
	1-216-049-00	METAL CHIP 1K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R724	1-216-025-00	METAL CHIP 100 5% 1/10W	
R730	1-216-037-00	METAL CHIP 330 5% 1/10W	
R731	1-216-031-00	METAL CHIP 180 5% 1/10W	
R732	1-216-031-00	METAL CHIP 180 5% 1/10W	
R733	1-216-025-00	METAL CHIP 100 5% 1/10W	
R734	1-216-025-00	METAL CHIP 100 5% 1/10W	
R735	1-216-031-00	METAL CHIP 180 5% 1/10W	
R751	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
R752	1-216-820-11	METAL CHIP 820 5% 1/16W	
R753	1-216-820-11	METAL CHIP 820 5% 1/16W	
R754	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
R755	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
R756	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
R757	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
R758	1-216-660-11	METAL CHIP 2.4K 0.5% 1/10W	
R759	1-216-661-11	METAL CHIP 2.7K 0.5% 1/10W	
R760	1-216-665-11	METAL CHIP 3.9K 0.5% 1/10W	
R761	1-216-669-11	METAL CHIP 5.6K 0.5% 1/10W	
R762	1-216-673-11	METAL CHIP 8.2K 0.5% 1/10W	
R763	1-216-679-11	METAL CHIP 15K 0.5% 1/10W	
R771	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
R772	1-216-820-11	METAL CHIP 820 5% 1/16W	
R773	1-216-820-11	METAL CHIP 820 5% 1/16W	
R774	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R775	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R776	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R777	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R778	1-216-660-11	METAL CHIP 2.4K 0.5% 1/10W	
R779	1-216-661-11	METAL CHIP 2.7K 0.5% 1/10W	
R780	1-216-665-11	METAL CHIP 3.9K 0.5% 1/10W	
R781	1-216-669-11	METAL CHIP 5.6K 0.5% 1/10W	
		< SWITCH >	
S701	1-692-037-31	SWITCH, KEY BOARD (⏏)	
S702	1-692-037-31	SWITCH, KEY BOARD (TAPE <□>)	
S703	1-692-037-31	SWITCH, KEY BOARD (DSP)	
S704	1-692-037-31	SWITCH, KEY BOARD (DSPL)	
S705	1-692-037-31	SWITCH, KEY BOARD (10)	
S706	1-692-037-31	SWITCH, KEY BOARD (ATA/5)	
S707	1-692-037-31	SWITCH, KEY BOARD (9)	
S708	1-692-037-31	SWITCH, KEY BOARD (BANK/4)	
S709	1-692-037-31	SWITCH, KEY BOARD (SHUF/3)	
S710	1-692-037-31	SWITCH, KEY BOARD (MTL/8)	
S711	1-692-037-31	SWITCH, KEY BOARD (REPEAT/2)	
S712	1-692-037-31	SWITCH, KEY BOARD (□□/7)	
S713	1-692-037-31	SWITCH, KEY BOARD (INTRO/1)	
S714	1-692-037-31	SWITCH, KEY BOARD (BL. SKIP/6)	
S715	1-692-037-31	SWITCH, KEY BOARD (OFF)	

KEY MAIN

Ref.No.	Part No.	Description			Remark
S716	1-692-037-31	SWITCH, KEY BOARD (FM)			
S717	1-692-037-31	SWITCH, KEY BOARD (AM)			
S718	1-692-037-31	SWITCH, KEY BOARD (CD)			
S719	1-692-037-31	SWITCH, KEY BOARD (SENS)			
S720	1-692-037-31	SWITCH, KEY BOARD (FILE)			
S721	1-692-037-31	SWITCH, KEY BOARD (+ ⏭ (AMS/SEEK))			
S722	1-692-037-31	SWITCH, KEY BOARD (⏮ - (AMS/SEEK))			
S723	1-692-037-31	SWITCH, KEY BOARD (+)			
S724	1-692-037-31	SWITCH, KEY BOARD (SEL)			
S725	1-692-037-31	SWITCH, KEY BOARD (-)			
S726	1-692-037-31	SWITCH, KEY BOARD (MUTE)			
**********					
*	A-3295-786-A	MAIN BOARD, COMPLETE (XR-U700)			
*	A-3295-796-A	MAIN BOARD, COMPLETE (XR-U500)			
		**********			
		< BUZZER >			
BZ601	1-529-108-21	BUZZER, PIEZOELECTRIC			
		< CAPACITOR >			
C17	1-124-994-11	ELECT (XR-U700)	100uF	20%	10V
C17	1-126-933-11	ELECT (XR-U500)	100uF	20%	10V
C18	1-124-994-11	ELECT (XR-U700)	100uF	20%	10V
C18	1-126-933-11	ELECT (XR-U500)	100uF	20%	10V
C19	1-124-944-11	ELECT (XR-U700)	100uF	20%	10V
C19	1-126-933-11	ELECT (XR-U500)	100uF	20%	10V
C20	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C21	1-124-584-00	ELECT	100uF	20%	10V
C26	1-136-169-00	FILM	0.22uF	5%	50V
C27	1-130-479-00	MYLAR	0.0047uF	5%	50V
C28	1-126-157-11	ELECT	10uF	20%	16V
C29	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C30	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C31	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C32-35					
	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C36	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C79	1-136-156-00	FILM	0.018uF	5%	50V
C80	1-136-156-00	FILM	0.018uF	5%	50V
C81	1-104-947-61	ELECT	4.7uF	20%	35V
C82	1-104-947-61	ELECT	4.7uF	20%	35V
C85	1-104-943-61	ELECT	2.2uF	20%	50V
C87	1-136-162-00	FILM	0.056uF	5%	50V

Ref.No.	Part No.	Description			Remark
C88	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C101	1-104-943-61	ELECT	2.2uF	20%	50V
C102	1-104-943-61	ELECT	2.2uF	20%	50V
C104	1-136-155-00	FILM	0.015uF	5%	50V
C106	1-104-943-61	ELECT	2.2uF	20%	50V
C107	1-104-943-61	ELECT	2.2uF	20%	50V
C111	1-136-164-00	FILM	0.082uF	5%	50V
C112	1-130-475-00	MYLAR	0.0022uF	5%	50V
C113	1-104-948-61	ELECT	10uF	20%	35V
C114	1-130-478-00	MYLAR	0.0039uF	5%	50V
C115	1-104-948-61	ELECT	10uF	20%	35V
C116	1-136-169-00	FILM	0.22uF	5%	50V
C118-120					
	1-104-948-61	ELECT	10uF	20%	35V
C121	1-104-551-11	FILM CHIP	0.01uF	5%	16V
C122	1-128-241-11	ELECT	220uF	20%	10V
C125	1-104-943-61	ELECT	2.2uF	20%	50V
C126	1-104-943-61	ELECT	2.2uF	20%	50V
C201	1-104-943-61	ELECT	2.2uF	20%	50V
C202	1-104-943-61	ELECT	2.2uF	20%	50V
C204	1-136-155-00	FILM	0.015uF	5%	50V
C206	1-104-943-61	ELECT	2.2uF	20%	50V
C207	1-104-943-61	ELECT	2.2uF	20%	50V
C211	1-136-164-00	FILM	0.082uF	5%	50V
C212	1-130-475-00	MYLAR	0.0022uF	5%	50V
C213	1-104-948-61	ELECT	10uF	20%	35V
C214	1-130-478-00	MYLAR	0.0039uF	5%	50V
C215	1-104-948-61	ELECT	10uF	20%	35V
C216	1-136-169-00	FILM	0.22uF	5%	50V
C218-220					
	1-104-948-61	ELECT	10uF	20%	35V
C221	1-104-551-11	FILM CHIP	0.01uF	5%	16V
C222	1-128-241-11	ELECT	220uF	20%	10V
C225	1-104-943-61	ELECT	2.2uF	20%	50V
C226	1-104-943-61	ELECT	2.2uF	20%	50V
C300	1-104-955-61	ELECT	100uF	20%	10V
C301	1-104-955-61	ELECT	100uF	20%	10V
C302	1-104-949-61	ELECT	22uF	20%	35V
C303	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C304	1-104-551-11	FILM CHIP	0.01uF	5%	16V
C305	1-104-559-11	FILM CHIP	0.047uF	5%	16V
C306	1-124-589-11	ELECT	47uF	20%	16V
C307	1-104-943-61	ELECT	2.2uF	20%	50V
C308	1-126-157-11	ELECT	10uF	20%	16V
C401	1-126-157-11	ELECT	10uF	20%	16V
C402	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C404	1-126-013-11	ELECT (XR-U700)	1000uF	20%	16V

Ref. No.	Part No.	Description			Remark
C404	1-126-952-11	ELECT (XR-U500)	1000uF	20%	16V
C500	1-126-541-11	ELECT	330uF	20%	16V
C501	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C502	1-126-157-11	ELECT	10uF	20%	16V
C503	1-126-157-11	ELECT	10uF	20%	16V
C505	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C506	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C507	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C509	1-126-157-11	ELECT (XR-U700)	10uF	20%	16V
C510	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C511	1-126-157-11	ELECT	10uF	20%	16V
C512	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C515	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C516	1-126-157-11	ELECT	10uF	20%	16V
C517	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C550	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C574	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C575	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C578	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C579	1-126-924-11	ELECT	330uF	20%	10V
C580	1-125-705-11	DOUBLE LAYERS	0.22F		5.5V
C581	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C600	1-124-248-00	ELECT	22uF	20%	35V
C601	1-124-248-00	ELECT	22uF	20%	35V
C602	1-135-138-11	TANTAL. CHIP	10uF	20%	25V
C603	1-124-589-11	ELECT	47uF	20%	16V
C604	1-124-589-11	ELECT	47uF	20%	16V
C605	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C607	1-124-584-00	ELECT	100uF	20%	10V
C609	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C651	1-104-947-61	ELECT	4.7uF	20%	35V

< CONNECTOR >

* CN301	1-695-202-11	SOCKET, CONNECTOR 15P	
CN302	1-580-916-11	SOCKET, CONNECTOR 12P	
* CN401	1-750-218-21	CONNECTOR (HOUSING) 18P	
CN402	1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD) 8P	
CN551	1-580-907-11	PLUG, CONNECTOR (UNILINK IN CONTROL)	
CN571	1-750-621-11	PLUG, CONNECTOR (14P-L)	

< TRIMMER >

CT501	1-141-276-00	CAP, TRIMMER

< DIODE >

D3	8-719-034-59	DIODE	MA4082-H(QZ)
D4	8-719-034-22	DIODE	MA4039-M(QZ)
D6	8-719-040-04	DIODE	MA721WK
D301	8-719-404-49	DIODE	MA111
D302	8-719-404-49	DIODE	MA111
D303	8-719-034-22	DIODE	MA4039-M(QZ)
D401	8-719-027-50	DIODE	MA142WK
D402	8-719-034-63	DIODE	MA4091-H(QZ)
D403	8-719-404-49	DIODE	MA111
D404	8-719-404-49	DIODE	MA111
D405	8-719-404-49	DIODE	MA111
D501	8-719-027-48	DIODE	MA142WA
D502	8-719-404-49	DIODE	MA111
D503	8-719-027-48	DIODE	MA142WA
D505	8-719-404-49	DIODE	MA111
D551	8-719-034-49	DIODE	MA4068-L(QZ)
D552	8-719-034-46	DIODE	MA4062-M(QZ)
D553	8-719-034-46	DIODE	MA4062-M(QZ)
D554	8-719-404-49	DIODE	MA111
D555	8-719-404-49	DIODE	MA111
D556	8-719-034-46	DIODE	MA4062-M(QZ)
D571	8-719-034-46	DIODE	MA4062-M(QZ)
D572	8-719-034-46	DIODE	MA4062-M(QZ)
D573	8-719-034-46	DIODE	MA4062-M(QZ)
D574	8-719-034-46	DIODE	MA4062-M(QZ)
D575	8-719-034-46	DIODE	MA4062-M(QZ)
D576	8-719-034-46	DIODE	MA4062-M(QZ)
D577	8-719-034-46	DIODE	MA4062-M(QZ)
D578	8-719-034-46	DIODE	MA4062-M(QZ)
D580	8-719-034-70	DIODE	MA4110-M(QZ)
D582	8-719-027-48	DIODE	MA142WA
D583	8-719-040-04	DIODE	MA721WK-(TX)
D584	8-719-404-49	DIODE	MA111
D601	8-719-034-41	DIODE	MA4056-L(QZ)
D602	8-719-034-96	DIODE	MA4200-(QZ)
D650	8-719-034-96	DIODE	MA4200-(QZ)
D651	8-719-027-50	DIODE	MA142WK
D653	8-719-034-54	DIODE	MA4075-M(QZ)

< IC >

IC2	8-759-823-81	IC	LC7216M
IC101	8-759-701-40	IC	NJM3404AM-T1
IC201	8-759-701-40	IC	NJM3404AM-T1
IC301	8-752-063-44	IC	CXA1646Q
IC302	8-759-700-94	IC	NJM5532M
IC303	8-759-701-40	IC	NJM3404AM-T1
IC401	8-759-823-87	IC	LB1638M
IC501	8-759-189-20	IC	uPD75518GF-131-3B9
IC502	8-759-166-74	IC	uPD75116GF-G50-3BE
IC503	8-759-165-36	IC	X24C04S8IC7000

MAIN

Ref. No.	Part No.	Description	Remark
IC551	8-759-096-16	IC MM1175XF-T1	
IC571	8-759-167-83	IC PST600EMT-T1	
IC601	8-759-182-75	IC BA3910B-V2	
		< JACK >	
* J1	1-750-619-11	JACK (ANTENNA)	
		< JUMPER RESISTOR >	
JR578	1-216-295-00	METAL CHIP 0 5% 1/10W (XR-U700)	
		< COIL >	
L3	1-410-204-31	INDUCTOR CHIP 10uH	
L501	1-410-204-31	INDUCTOR CHIP 10uH	
L502	1-410-204-31	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q5	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q6	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q8	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q8	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q9	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q9	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q10	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q10	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q11	8-729-015-74	TRANSISTOR UN5111	
Q12	8-729-231-74	TRANSISTOR 2SC4116-GL	
Q101	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q101	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q102	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q102	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q201	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q201	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q202	8-729-021-95	TRANSISTOR RN1441-A-TE85L (XR-U700)	
Q202	8-729-920-21	TRANSISTOR DTC314TKH04 (XR-U500)	
Q301	8-729-424-52	TRANSISTOR UN211F-TX	
Q302	8-729-021-93	TRANSISTOR UPA502T-T1	
Q401	8-729-807-12	TRANSISTOR 2SD1802-S	
Q402	8-729-015-74	TRANSISTOR UN5111	
Q403	8-729-106-60	TRANSISTOR 2SB1115A	
Q404	8-729-015-76	TRANSISTOR UN5211	
Q405	8-729-902-99	TRANSISTOR DTC114TK	
Q406	8-729-015-76	TRANSISTOR UN5211	
Q501	8-729-015-76	TRANSISTOR UN5211	
Q502	8-729-015-74	TRANSISTOR UN5111	
Q551	8-729-403-35	TRANSISTOR UN5113	
Q552	8-729-231-74	TRANSISTOR 2SC4116-GL	
Q553	8-729-015-74	TRANSISTOR UN5111	
Q570	8-729-015-76	TRANSISTOR UN5211	
Q571	8-729-015-74	TRANSISTOR UN5111	
Q572-575	8-729-807-12	TRANSISTOR 2SD1802-S	
Q576	8-729-015-76	TRANSISTOR UN5211	
Q577	8-729-106-60	TRANSISTOR 2SB1115A	
Q578	8-729-920-56	TRANSISTOR FMG1	
Q579	8-729-020-67	TRANSISTOR XN1A312-TX	
Q601	8-729-807-12	TRANSISTOR 2SD1802-S	
Q602	8-729-421-22	TRANSISTOR UN2211	
Q650	8-729-015-76	TRANSISTOR UN5211	
Q651	8-729-231-74	TRANSISTOR 2SC4116-GL	
		< RESISTOR >	
R21	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R23	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R24	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R25	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R27	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R29	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R30	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R31	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R32	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R33	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R81	1-216-643-11	METAL CHIP 470 0.5% 1/10W	
R82	1-216-643-11	METAL CHIP 470 0.5% 1/10W	
R83	1-216-665-11	METAL CHIP 3.9K 0.5% 1/10W	
R85	1-208-460-41	METAL GLAZE 8.2K 2% 1/10W	
R87	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R88	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R101	1-208-530-41	METAL GLAZE 68K 2% 1/10W	
R110	1-208-502-41	METAL GLAZE 4.7K 2% 1/8W	
R111	1-208-502-41	METAL GLAZE 4.7K 2% 1/8W	
R121	1-208-559-41	METAL GLAZE 22K 2% 1/8W	
R122	1-208-559-41	METAL GLAZE 22K 2% 1/8W	
R123	1-208-470-41	METAL GLAZE 220 2% 1/8W	
R124	1-208-470-41	METAL GLAZE 220 2% 1/8W	
R125	1-208-502-41	METAL GLAZE 4.7K 2% 1/8W	
R126	1-208-498-41	METAL GLAZE 3.3K 2% 1/8W	
R127	1-208-502-41	METAL GLAZE 4.7K 2% 1/8W	
R128	1-208-498-41	METAL GLAZE 3.3K 2% 1/8W	
R129	1-208-445-41	METAL GLAZE 2.2K 2% 1/10W	
R131	1-208-445-41	METAL GLAZE 2.2K 2% 1/10W	
R201	1-208-530-41	METAL GLAZE 68K 2% 1/10W	
R210	1-208-502-41	METAL GLAZE 4.7K 2% 1/8W	
R211	1-208-502-41	METAL GLAZE 4.7K 2% 1/8W	
R221	1-208-559-41	METAL GLAZE 22K 2% 1/8W	
R222	1-208-559-41	METAL GLAZE 22K 2% 1/8W	

Ref. No.	Part No.	Description			Remark
R223	1-208-470-41	METAL GLAZE	220	2%	1/8W
R224	1-208-470-41	METAL GLAZE	220	2%	1/8W
R225	1-208-502-41	METAL GLAZE	4.7K	2%	1/8W
R226	1-208-498-41	METAL GLAZE	3.3K	2%	1/8W
R227	1-208-502-41	METAL GLAZE	4.7K	2%	1/8W
R228	1-208-498-41	METAL GLAZE	3.3K	2%	1/8W
R229	1-208-445-41	METAL GLAZE	2.2K	2%	1/10W
R231	1-208-445-41	METAL GLAZE	2.2K	2%	1/10W
R301	1-208-502-41	METAL GLAZE	4.7K	2%	1/8W
R302	1-208-502-41	METAL GLAZE	4.7K	2%	1/8W
R303	1-216-085-00	METAL CHIP	33K	5%	1/10W
R306	1-216-017-00	METAL CHIP	47	5%	1/10W
R401	1-216-821-11	METAL CHIP	1K	5%	1/16W
R402	1-220-149-11	METAL GLAZE	2.2	10%	1/2W
R403	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R404	1-216-833-11	METAL CHIP	10K	5%	1/16W
R405	1-208-474-41	METAL GLAZE	330	2%	1/8W
R406	1-208-474-41	METAL GLAZE	330	2%	1/8W
R502	1-216-845-11	METAL CHIP	100K	5%	1/16W
R503	1-216-845-11	METAL CHIP (XR-U500)	100K	5%	1/16W
R507	1-216-837-11	METAL CHIP	22K	5%	1/16W
R510	1-216-821-11	METAL CHIP	1K	5%	1/16W
R521	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R522	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R523	1-216-025-00	METAL CHIP	100	5%	1/10W
R524	1-216-025-00	METAL CHIP	100	5%	1/10W
R526	1-216-097-00	METAL CHIP (XR-U500)	100K	5%	1/10W
R527	1-216-097-00	METAL CHIP	100K	5%	1/10W
R531	1-216-845-11	METAL CHIP	100K	5%	1/16W
R532	1-216-837-11	METAL CHIP	22K	5%	1/16W
R533	1-216-837-11	METAL CHIP (XR-U700)	22K	5%	1/16W
R534	1-216-837-11	METAL CHIP	22K	5%	1/16W
R538	1-216-841-11	METAL CHIP	47K	5%	1/16W
R540	1-216-049-00	METAL CHIP	1K	5%	1/10W
R541	1-216-841-11	METAL CHIP	47K	5%	1/16W
R542	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R543-545	1-216-845-11	METAL CHIP	100K	5%	1/16W
R546	1-216-073-00	METAL CHIP	10K	5%	1/10W
R550	1-216-017-00	METAL CHIP	47	5%	1/10W
R551	1-216-025-00	METAL CHIP	100	5%	1/10W
R552	1-216-025-00	METAL CHIP	100	5%	1/10W
R553	1-216-073-00	METAL CHIP	10K	5%	1/10W
R554	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R555	1-216-841-11	METAL CHIP	47K	5%	1/16W
R556	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R572	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R573	1-216-025-00	METAL CHIP	100	5%	1/10W
R575	1-216-025-00	METAL CHIP	100	5%	1/10W
R576	1-216-025-00	METAL CHIP	100	5%	1/10W
R579	1-208-474-41	METAL GLAZE	330	2%	1/8W
R582-585	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R586	1-208-488-41	METAL GLAZE	1.2K	2%	1/8W
R587	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R588	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R589	1-216-839-11	METAL CHIP	33K	5%	1/16W
R590	1-216-845-11	METAL CHIP	100K	5%	1/16W
R591	1-216-833-11	METAL CHIP	10K	5%	1/16W
R592	1-216-845-11	METAL CHIP	100K	5%	1/16W
R601	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R602	1-216-049-00	METAL CHIP	1K	5%	1/10W
R603	1-216-037-00	METAL CHIP	330	5%	1/10W
R650	1-208-494-41	METAL GLAZE	2.2K	2%	1/8W
R653	1-216-841-11	METAL CHIP	47K	5%	1/16W
R654	1-216-841-11	METAL CHIP	47K	5%	1/16W
R655	1-216-838-11	METAL CHIP	27K	5%	1/16W
R656	1-216-845-11	METAL CHIP	100K	5%	1/16W

< NETWORK RESISTOR >

RB503	1-239-426-91	RESISTOR, NETWORK (CHIP TYPE) 2.2KX4
RB504	1-239-426-91	RESISTOR, NETWORK (CHIP TYPE) 2.2KX4
RB505-507	1-236-907-11	RESISTOR, NETWORK (CHIP TYPE) 100KX4

< TUNER >

TU1	A-3282-003-A	TUNER UNIT (TUX-001A)

< SWITCH >

S501	1-572-272-11	SWITCH, SLIDE (POWER SELECT)
S502	1-572-272-11	SWITCH, SLIDE (CHANNEL SPACE)
S510	1-572-288-11	SWITCH, PUSH (NOSE)

< VIBRATOR >

X1	1-567-848-11	VIBRATOR, CRYSTAL (7.2MHz)
X501	1-567-821-11	VIBRATOR, CRYSTAL (4.19MHz)
X502	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz)

****

*	1-648-247-11	PLUNGER BOARD

****

< PLUNGER >

PL401	1-454-461-11	SOLENOID, PLUNGER

****

REEL RESET

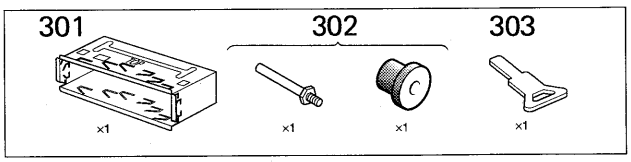
Ref. No.	Part No.	Description	Remark
*	1-648-246-11	REEL BOARD	
		**********	
		< CONNECTOR >	
CN201	1-691-742-11	PIN, CONNECTOR (PC BOARD) 4P	
		< PHOTO INTERRUPTER >	
PH201	8-719-988-14	PHOTO INTERRUPTER PR-11-B	
PH202	8-719-988-14	PHOTO INTERRUPTER PR-11-B	
		< TRANSISTOR >	
Q201	8-729-403-07	TRANSISTOR XN1213	
		< RESISTOR >	
R201	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R202	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R203	1-216-190-00	METAL GLAZE 470 5% 1/8W	
**********			
*	1-648-719-12	RESET BOARD	
		**********	
		< CONNECTOR >	
CN572	1-750-622-11	SOCKET, CONNECTOR 14P	
* CN573	1-691-558-11	SOCKET, CONNECTOR 12P	
		< DIODE >	
D570	8-719-422-64	DIODE MA8062-M	
		< RESISTOR >	
R570	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		< SWITCH >	
S571	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE) (RESET)	
**********			
		MISCELLANEOUS	
		**********	
14	1-751-263-21	CORD (WITH CONNECTOR)	
* 126	1-565-121-11	HOUSING, CONNECTOR 2P	
* 127	1-565-163-11	TERMINAL, SOLDERLESS	
F901	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A)	
F902	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A)	
HP901	1-543-726-41	HEAD, MAGNETIC (PLAYBACK)	
M901	X-3344-136-3	MOTOR SUB ASSY, CAPSTAN/REEL	
M902	X-3362-826-1	MOTOR ASSY, LOADING TAPE OPERATION	
S902	1-572-397-11	SWITCH, ROTARY SLIDE (TAPE OPERATION)	
**********			

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	X-3366-865-1	CASE ASSY	
	1-467-131-11	REMOTE COMMANDER (RM-X36) (XR-U700)	
	3-756-919-61	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (XR-U700)	
	3-756-920-61	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (XR-U500)	
	3-756-922-61	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (XR-U700)	
	3-756-923-61	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (XR-U500)	
*	3-904-840-01	CUSHION (UPPER)	
*	3-904-841-01	CUSHION (LOWER)	
*	3-905-675-01	REFLECTOR (MIRROR)	
*	3-905-749-01	INDIVIDUAL CARTON (XR-U700)	
*	3-905-750-01	INDIVIDUAL CARTON (XR-U500)	
	3-908-052-01	COVER, BATTERY (RM-X36)	
**********			

****
HARDWARE LIST
****

#1	7-621-255-65	SCREW +P 2X10
#2	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT
#3	7-621-770-67	SCREW +PTT 2.6X6 (S)
#4	7-624-102-04	STOP RING 1.5, TYPE -E
#5	7-628-253-05	SCREW +PS 2X4
#6	7-621-770-XX	SCREW +PTT 2.6X8 (S)
#7	7-627-850-67	SCREW, PRECISION +P 1.4X4
#8	7-627-850-18	SCREW, PRECISION +P 1.4X2.5
#9	7-624-104-04	STOP RING 2.0, TYPE -E
#10	7-627-554-07	SCREW, PRECISION +P 2X2.2
#11	7-621-772-10	SCREW +B 2X4
#12	7-621-775-40	SCREW +PTT 2.6X8 (S)
#13	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT
#14	7-621-775-68	SCREW +PTT 2.6X12 (S)

MOUNTING HARDWARE



Ref. No.	Part No.	Description	Remark
* 301	X-3366-235-3	FRAME ASSY, FITTING	
302	X-3366-405-1	SCREW ASSY (EXP), FITTING	
303	3-388-078-01	KEY	

9-957-918-31

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